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CLINICAL OBSERVATIONS ON PSEUDO-MORBID APPEARANCES;

DELIVERED AT CHARING-CROSS HOSPITAL,

BY W. D. CHOWNE, M.D.,

Physician to the Hospital.

IT is desirable that we should, in continuation of the subject of discolourations, pass from those that are the consequence of excess of blood, to such as are the consequence of stains.

We find constantly, in the course of our post-mortem examinations, discolourations from some one or more of those causes which, independently of disease, are capable of changing the natural hue. These may be divided into such as produce that effect:—

1. By simple contact and imbibition, as by the spleen and the gall-bladder, and by the colon, when retaining its natural contents.

2. By simple transudation, as of the blood through the parietes of its own vessels.

3. By the agency either of the gastric juice, or of gas that may be evolved in the stomach, on the blood within the vessels.

4. By coloured matters taken as ingesta into the stomach.

The discolourations from simple contact and imbibition are so common, their cause is so obvious, and the means of distinguishing them from morbid discolourations are so evident, that I need not detain you further than to remind you that the influence of these causes may sometimes spread to a much greater extent than you may deem probable; the characteristics, however, are uniformly the same.

Discolouration from transudation of blood through the parietes of vessels has the effect of rendering them very conspicuously visible, both on the outer and the inner surfaces of the viscus, but is not characterised by any peculiarities that need detain us.

Discolourations by the action of gastric juice, and of gases in the stomach, on the blood within the vessels, require some brief notice. The discolouration produced by the gastric juice is similar, or nearly so, to that produced in the event of poisoning by acetic acid, as described by M. Orfila. He defines it to be a black, or brownish-black, discolouration of the blood, without affecting the coats of the vessels.

Dr. Todd observes, that "the discolouration is not so extensive as in that of poisoning by the acid, the quantity of acid in the gastric juice being so small;" and adds, "but we sometimes meet with a brownish-black discolouration from morbid poison, which may be distinguished chiefly by the fact of its occupying the villi of the membrane, and by the gradation through which the colour passes from red to brown, and from brown to black; to which we may add, that the discolouration by the gastric juice is most conspicuous in the large trunks. The absence of all appearance of transudation, as well as the state of the other tissues, will sufficiently indicate that the black colour is not caused by putrefaction."

The discolourations attributed to gas evolved in the stomach, resemble very much in appearance those attributed to the gastric juice; there are differences of opinion, however, as to whether discolourations are really produced by gas, and present experience on the subject does not appear to be wholly satisfactory. M. Andral says "gases must not be considered as causes of discolouration until it has been proved that a series of gases, inclosed in portions of intestine, produce the discolouration."

Discolourations of the lining membrane of the intestinal canal from the last cause, viz., coloured ingesta taken into the stomach, necessarily present themselves to our notice but very rarely; the possibility of colour being imparted in this way was ascertained at a very critical juncture, and under circumstances calculated to show the great importance of accurate and vigilant investigation in all cases.

A person lying long in delicate health died suddenly, after taking a laxative draught; and the stomach as well as the gullet, being found, on dissection, red and livid in various places, it was hastily inferred, by his medical attendants, that these appearances were the effect of poison, and that the apothecary had committed some

fatal error in compounding the draught; but another physician, who was acquainted with the deceased, although he did not attend him professionally, strongly suspected that he had died a natural death; and happening to know he was in the habit of taking a strong infusion of the corn-poppy, inferred that the supposed signs of inflammation were merely stains arising from the habitual use of that substance; accordingly, on making the experiment, he found that in dogs, to which a similar infusion was given, appearances were produced identically the same.

Stains may also be produced on the lining membranes of viscera by the contact of blood effused into them; and this shows the propriety of pursuing post-mortem examinations with a caution that is calculated to prevent a needless disturbance of parts, in order that we may, in such cases, have the evidence afforded by the coagulum being found on or near the discolouration it had caused. Such discolourations may be formed in any part of the intestinal canal, and are generally of a uniform, not of an arborescent character.

It will now be desirable that we should consider some of the leading features connected with discolourations of the circulatory system, with a view to distinguishing between such as are morbid and others that are pseudo-morbid. In addition to appearances which are the result of the general principles that have been described, there are others requiring notice.

We have opportunities, in the course of our post-mortem examinations, of seeing discolourations on the lining membranes of the heart, which are not the effect of disease, and these very commonly mark the spot where blood has lain, leaving no doubt of the colour having been derived, by a process of imbibition, from the colouring matter of the blood.

A question, however, very likely to present itself to your minds, in reference to stains imparted by coagula, is, whether they are not, therefore, necessarily post-mortem results; or, in other words, whether coagula, can exist in the heart during life.

The very great frequency with which coagula are found in the cavities of the heart renders their history a subject of great interest; and however difficult it may appear to be to reconcile the possibility of continued circulation with their presence, yet pathological research has put the question beyond doubt. We see proofs of this:—

1. In the firmness of some coagula, which, indeed, are firm in a degree that is not compatible with post-mortem formation.

2. In their extremely close adhesion to the surfaces of the heart.

3. In the evident organisation they have undergone.

4. In their occasionally containing fluids and substances, the indubitable result of vital action.

The disposition to become firm, and united to surfaces with which they happen to be in contact, is strictly in accordance with the proneness evinced on other occasions by the living surfaces to form adhesions.

The disposition to organisation is in conformity with the tendency observed in blood at rest in the living body to become vascular; and it is by no means uncommon to meet with coagula presenting such condition wherever difficulty to the free transit of blood exists. If, in consequence of irritation on the lining membrane of an artery, for instance, coagulable lymph is thrown out, the blood in passing over this uneven surface will have a constant tendency to form depositions; we see this where the internal membrane has lost its smoothness from any cause; and it is exemplified very fully in the collections within aneurysmal enlargements. Within the cavities of the heart numerous seemingly unimportant deviations from the natural state may, by impeding the free passage of the blood, produce obstructions which ultimately give rise to coagula; sometimes we find an inherent abnormal tendency in the blood itself to form coagula. That coagula should contain substances not originally included within them may, at first, appear not to be in accordance with the general laws of physiology; but the fact being established, that they admit of organisation, and transmutation into substances possessing all the means of nutrition and growth, there remains no difficulty in believing that new depositions may partake of new characters, and constitute formations different from those in which they originated.

The progress of formations within the heart has been accurately described by Lænnec, under the name of vegetations; at first they resemble an amorphous mass of fibrine; they afterwards become supplied with vessels; and, finally, assume a determinate form. It is not necessary, however, that I should occupy your attention with reference to these productions, further than to explain the evidence upon which we may conclude that they exist during life.

M. Bouillaud gives an example of a soft coagulum that almost filled the right auricle of the heart; it was traversed in almost every direction by an infinite number of minute vessels; and of another, in which the right auricle and right ventricle contained masses of albuminous and fibrinous matter, evidently organised, and connected with the parietes of their respective cavities by filaments, which it was necessary to tear before they could be detached.

These concretions may contain pus, and cartilaginous and osseous substances, under such circumstances that it is impossible to account for their presence otherwise than by admitting that they have been formed within the coagulum.

Finally, we may revert to the different circumstances under which vegetations are found, as it regards their connection or otherwise with the heart. 1st. They may be found simply in contact with the surface on which they are laid. 2ndly. They may be found adhering by the simple fibrous elongations extending into the meshes of the parietes; or by those prolongations having become organised, and incorporated with the substance of the heart itself. And, lastly, after having been adherent to the surface of the heart, they may be found, subsequently, loose and unattached. These frequently bear on their surface a number of filaments, showing signs of having been torn across, and which, no doubt, had served to unite the mass to the surface on which it was originally formed. These masses, by lying in contact with the lining membrane of the heart, communicate to it a colour which, without due precaution, may be attributed to disease. The patch will be uniform in its colour, so far as it extends; and its extent will be marked by a defined margin, corresponding with the form and position of the coagulum: it will necessarily be in a depending part, unless where coagula, by the force of adhesion, remain attached to other parts.

These facts, then, afford us reason for concluding that red discolourations, the effects of stains, may be produced by coagula during life. Ecchymoses may also be produced during life, by exudation through the walls of the heart, between the fibres; they may be formed as well on the outer as on the inner surface. Examples of this are sometimes met with in persons dying of purpura hæmorrhagica.

The effects of gravitation in producing hyperæmia, either of the substance of the heart or of the lining membrane, bears no comparison with its influence in other parts, as for example, in the lung. In addition, however, to such slight effect as the general causes may have in the production of pseudo-morbid redness of the lining membranes of the heart, we have especially to consider those

Of Temperature;
Of Incipient Mortification; and
Of Air.

The effect of temperature is so uniform, that whatever the disease may have been which occasioned death, the frequency of vascular redness is proportioned to the elevation of temperature.

According to the experience of M. Andral, the comparative frequency of redness in the inner surface of the heart and vessels, in the different months of the year, will be in proportion to the degree of heat and lapse of time. This rule is confirmed by numerous dissections:—

The number of times in which redness was found was, in		The number of times in which redness was not found was, in	
November	2	November	8
December	4	December	13
January	3	January	10
February	1	February	8
Total	10	Total	39
March	4	March	2
April	3	April	3
May	2	May	3
June	6	June	8
Total	15	Total	16
July	9	July	3
August	14	August	4
September	6	September	2
October	3	October	4
Total	32	Total	13

The second cause assigned for post-mortem changes in the colour of the inner surface of the heart, viz., incipient putrefaction, is, like the influence of temperature, extremely uniform in its effect.

We may refer, on this subject, also, to a report of cases furnished by M. Andral of dissections at different periods after death:

After		There were cases of Redness	There were cases of Paleness
10 hours		2	0
11	..	0	1
12	..	0	1
13	..	0	1
14	..	0	2
15	..	1	3
16	..	0	4
17	..	0	5
18	..	1	4
19	..	1	7
20	..	1	6
21	..	1	12
22	..	1	11
23	..	3	8
24	..	6	10
		17	75
25	..	2	5
26	..	2	6
27	..	2	2
28	..	6	1
29	..	3	0
30	..	9	2
		24	16
31	..	7	0
32	..	0	0
33	..	1	1
34	..	6	2
35	..	3	0
36	..	7	2
37	..	4	0
38	..	3	0
39	..	1	0
40	..	6	0
		38	5

41 hours	Redness 0	Paleness 0
42 ..	3	0
43 ..	4	1
44 ..	.....	.....
45 ..	1	0
46 ..	0	0
47 ..	0	0
48 ..	5	0
53 ..	2	0
60 ..	5	0
	20	1

The results of these dissections confirm the general rule, that whatever the cause of death may have been, redness of the lining membrane of the heart will be in proportion to the lapse of time and the degree of heat to which the body has been exposed. We must not forget, however, the exceptions that apply to all general rules; and we find, in this enumeration of cases, that in two bodies opened ten hours after death, there was redness; and these, moreover, were examined in March and December; while in one opened 43 hours after death there was paleness, and this was examined in June.

The lining membrane of the arteries, as well as the heart, is frequently found tinged with red of various hues; sometimes this will be uniform over a considerable portion of the membrane; at others, it will be in patches; and it may be the consequence of morbid action prior to death, or of changes after. That it may be the consequence of morbid action we have reason to believe, from its being sometimes found so soon after death that as a post-mortem effect the time would not have been sufficient for its production; and also from the results of experiments practised on animals for the purpose of ascertaining the effect of irritation on the lining membrane.

An opportunity was afforded to M. Dupuy and M. Andral to witness the effect of diseases under some circumstances in producing the redness in question. We should, however, premise that, on referring to the report of MM. Rigot and Trousseau, on dissections performed immediately after death in 28 horses, in which the heart and arteries were considered to be in a healthy state, in every case they found the lining membrane of the heart thin, white, transparent, and here and there of a pearly lustre; that of the arteries yellowish-white, and that of the veins more purely white. In two instances only the aorta exhibited a few copper-coloured specks. The appearances were not materially different up to the fourth hour after death. Sometimes little change had taken place from the fifth to the tenth hour, even when the circumstances were favourable to the production of pseudo-morbid redness; but if the examination was delayed beyond the tenth or fifteenth hour after death, "the inner membrane of the heart and its great arteries and veins were found speckled or streaked with red stains, which in the arterial system were scarlet in tint, and in the veins reddish-brown."

"In 1825 a violent distemper prevailed amongst the horses at Paris, and in some of the provinces; the most general symptoms, with but few exceptions, were those of gastro-intestinal irritation; with few exceptions, the thoracic viscera were likewise implicated, the breathing being greatly affected, although there was not much cough." Dissections of these took place "while the animals were scarcely slaughtered," and in many the internal membrane of the heart and aorta presented a bright red colour. During the same period opportunities occurred to M. Bouley, jun., a veterinary surgeon, to examine more than 50 horses that died of the same complaint. His dissections were made within from half an hour to three hours after death; and in almost every instance he found the internal membrane of the heart and aorta of a bright scarlet or purple colour."

In addition to the uniform colour of the internal membrane, there was a remarkable degree of softening in the muscular structure of the heart, inflammation of the pericardium, effusions of different kinds into its cavity; and in one of the cases recorded by M. Bouillaud the internal membrane is described as being covered in those parts where it was red, by a thin layer of albuminous matter.

As examples of similar redness from local irritation, we may revert to the experiments performed by M. Gendrin; these were performed for the purpose of ascertaining whether discolourations produced in the arterial coats by pressure, and by internal irritants, produced a *uniform* redness, or appearances similar to those produced by irritation in other parts of the body. A moderate degree of pressure on an artery, caused, at the end of twelve or fifteen hours, the internal coat to be of a pale red, the middle of a palish yellow, and the cellular sheath to be minutely injected. Above and below the part compressed, the outer and middle coats were uniformly reddish, and infiltrated with serum, and the inner coat was of a brilliant red colour. After a lapse of thirty or forty hours the middle coat became evidently softened and injected, and immediately above and below the compression the external and middle coats seemed confounded into a red, flesh-like substance, infiltrated with blood and serum.

In a second experiment some irritating substance was injected into a portion of artery included between ligatures, from which the blood had been previously washed; the internal membrane, after a few hours, was found to have acquired a bright violet colour.

We have, then, satisfactory evidence of a certain kind of redness being produced in

the internal arterial surfaces by disease; and it is not less certain that appearances resembling them may exist quite independently of disease. The pseudo-morbid discolourations may be formed during life and after death.

In addition to circumstances under which they occur during life in other parts, they are sometimes produced in the arteries, as well as in the heart, by extreme fluidity of the blood. The causes by which they are produced after death, in addition to causes which have been spoken of as general causes, are—

1. Temperature.
2. Incipient putrefaction, the effect of time.
3. Coagula contained within them.
4. Exposure to air.

Of the effect of temperature we have had examples in speaking of discolouration of the lining membrane of the heart; as, also, of the effects of incipient putrefaction.

Of the effects of coagula we have also seen analogous examples in reference to stains in the cavities of the heart, and we witness it frequently in our post-mortem examinations. The effect of air in producing similar redness, you have seen in portions of artery laid open and exposed for the purpose.

In endeavouring to distinguish between discolourations that may have been caused by disease, and pseudo-morbid discolourations, we must revert for characteristics of the former to the general contingencies and concomitants which attend inflammation; and for characteristics of the latter to the general principles upon which pseudo-morbid discolourations occur, for no reliance can with safety be placed on the *colour*, as an individual guide, the morbid and pseudo-morbid redness being essentially similar. You are too well acquainted with the general causes of pseudo-morbid redness, on the one hand, and with the general results and products of inflammation, on the other, to require a repetition of them.

We frequently find, as you are aware, softening of the mucous membrane, indeed of all the membranes of the intestinal canal, and this is a pathological state of great interest.

In speaking of *discolourations* of the mucous membrane, I noticed to you the necessity of being acquainted with its natural colour; so, in relation to the subject of *softening*, it is necessary to be acquainted with its natural and healthy texture. We have no terms that express different degrees of firmness as we can express different shades of hue, and the necessary knowledge can be acquired only by your availing yourselves of the practical opportunities which post-mortem examination affords. It will be necessary, also, to keep in your recollection that the *same degree* of firmness or softness is not natural to the digestive canal *throughout*, and that a degree of consistence which in the colon is natural and healthy, in the stomach or duodenum is a morbid softening. In the healthy state the mucous membrane should admit of being taken up by the forceps, and removed in shreds, but as softening advances it eludes their grasp, and escapes in the form of a pulpy substance. There may be a softening during life, which cannot be perceived by the sight alone, and is only discovered by scraping the surface with the scalpel, in which case it is removed with the utmost facility, in a gelatinous form.

The softening may take place either in circumscribed patches of more or less circular figure, in streaks, lines, or sinuous bands; and in some instances the surface of the softened part will be lower than the sound part, giving the appearance of furrows. It is necessary to keep this peculiarity in our recollection lest such depressions should be mistaken for ulcerations. The colour of the softened part may be of a greyish tint, as in health; it may be paler than in the natural state, approaching to a bluish shade; it may be milky white, or of a red or brown colour; these may be spread over the whole surface of the softened part, or may be in patches.

Patches of softening may exist, also, at small distances from each other, the mucous membrane in the intermediate parts being quite firm and sound. A case occurred in the Hôpital des Enfans Trouvés. The stomach of a child had on the internal surface ten small patches, of a pale red colour and exactly circular form; they were on a level with the rest of the surface, and were each about the size of a half-franc piece; at those parts the membrane was pulpy and soft, the intermediate parts firm and healthy.

When there is softening of the mucous membrane of the stomach near the splenic portion, there is frequently a dilatation of the veins between the coats, by which they are rendered more than usually visible.

Softening, however, of different parts of the digestive canal, is not confined to the mucous membrane, but may affect equally all the membranes, and that to such an extent that, with very moderate pressure between the fingers the structure will be entirely destroyed; indeed, they are sometimes reduced almost to a jelly, without even the appearance of an organised texture, to the touch, yet appearing to the eye quite sound. This constitutes the softening with which you are acquainted under the designation given to it by M. Cruveilheir of "ramollissement gelatiniforme." The parts involved in this kind of softening may be of the natural colour, or remarkably pale, or red. It is, like the softening of the mucous membrane, most commonly found at the splenic portion of the stomach; it may also affect the small intestines, and the cœcum or colon.

With reference to pseudo-morbid softenings there are two questions to be consider-

ed; first, whether softening liable to be mistaken for morbid softening can be produced either by the natural process of decomposition, or by solvents within the stomach, the *effects of which are produced after death.*

That putrefaction has a direct tendency to produce softening is certain; yet it is equally certain that all parts are not amenable to this influence in equal degrees, and the parietes of the intestines are much less so than the brain, lungs, liver, spleen, or kidneys; and of the different membranes forming the parietes, the mucous membrane is the least amenable. In the course of our post-mortem examination in cases where delay has taken place, we find these parts constantly firm, although changed in their colour and general aspect, even when other parts, especially parenchymatous structures, have lost a great deal of their firmness. The mucous membrane, however, like other parts, is subject to very different rates of progress in the changes of decomposition, accordingly as it may have remained undisturbed in the body, exposed to the air, or immersed in water,—distinctions of very great importance when discrimination is requisite for forensic purposes.

When it has remained undisturbed in the body it has frequently been found at the end of eight and ten days, not at all softened, even after the intestines have been green, after there has been exudation within them, ecchymoses in their parietes, and emphysema between their membranes. When exposed to the air the process has been found to be accelerated. M. Billard exposed an opened intestinal canal for twelve days, in a temperature ten degrees above zero, and in a room where the sun shone every day. The mucous membrane remained firm until the sixth day, although general putrefaction was a good deal advanced; on the tenth day it was of a pultaceous consistence. When immersed in water the progress has been found to be much retarded. M. Billard, "after leaving a portion of intestine for two months in the same water, and not till then, found its mucous membrane perceptibly softened, though it still retained a certain degree of consistence; it was not until three months had elapsed that it was found to be so softened as to resemble merely a kind of very fetid layer."

That species of softening which terminates in what is called *spontaneous perforation*, is a subject of interest, but our time does not permit us to enter upon it at present.

MEDICO-PAROCHIAL RESEARCHES.

By WILLIAM BARRETT MARSHALL, *R.N., formerly one of the Medical Officers of the Kensington Union.*

"It is the duty of every one whose public situation affords more than ordinary opportunities of observation, to communicate such results as he may conceive are calculated to promote scientific investigation, and, ultimately, to benefit others."—THOMAS ALCOCK.

DISEASE—VARIOLA. PARISH—CHELSEA.

THE prevalence of small-pox among the poor in the district of which I had the medical charge;—the unprotected state of their families, so far as vaccination may be considered to afford protection against that disease;—and their ignorance, and consequent scepticism, regarding the utility of vaccine inoculation to prevent the contagion, or of medical science to arrest the development, or diminish the mortality, of small-pox,—led me to inquire for myself how far the expectations of the illustrious Jenner could be said to have issued in disappointment; and, as in a professional point of view, a not less interesting object of research, to endeavour to ascertain whether variola, as philosophers and women have both agreed in affirming, is, indeed, that malignant and intractable disease for which the materia medica supplies no remedy; and which is equally incurable in the hands of physicians, surgeons, apothecaries, druggists—or counter-practitioners, as they are aptly called—grandmothers, and—*proh pudor!*—quacks.

Besides recording, daily, all the facts which came under my own observation, I determined to ferret out every case of small-pox which might occur, within a given period, in any part of the parish, and to institute a personal examination into the history of every such case. But the labour of my parochial duties, during the epidemic, compelled me to postpone the latter part of this self-imposed task until a more leisure time should arrive; and an illness which confined me to my house, and made a cripple of me for nearly three months, forced me, on returning to active duties, to deviate very considerably from the path I had proposed to pursue, and to narrow the limits of my researches within a smaller compass.

They will be found, as thus circumscribed, to embrace, in the first place, full particulars of all the patients attended by me on behalf of the parish, and a record of the intelligence obtained respecting the circumstances of every member of their respective families, in relation to small-pox and vaccination.

In the second place, such particulars as I was able to collect of all the other patients attended for small-pox, on behalf of the parish, by my colleagues; and similar information concerning all the sick poor in

this parish who had been treated for that disease by the medical officers of the Chelsea, Brompton, and Belgrave Dispensary, a very useful and ably-managed institution, of which I hope at some future time to furnish the medical public with a statistical account.

In the third place, a particular and personal inquiry into the history of every registered case of mortality from small-pox which happened in the whole parish for an entire twelvemonth, including all the information I could elicit from the surviving members of their respective families, in connection with the subject-matter of my inquiry; the range of which, even when thus limited, extends to not less than 300 cases of recent small-pox, and to upwards of 500 cases of small-pox altogether, besides 231 cases of cow-pox.

I.

First, then, I subjoin a table (A) of 73 cases which occurred among the paupers of South Chelsea, and were attended by me officially, between the 2nd of June, 1838, and the 1st of June, 1839, inclusive.

The 73 cases reported in this table were distributed among 45 families, the numerical strength of which, and the proportions of unvaccinated, vaccinated, and inoculated, or otherwise variolated members in each family, exhibiting a partial view of the comparative prophylactic powers severally exercised by the vaccine and the varioloid diseases, are brought together in a second table (B) which I also annex.

From these two tables it will be seen that parochial medical relief was afforded to 45 families, and 73 persons, afflicted with small-pox, in the southern division of Chelsea, during one twelvemonth. That the total number of members composing these families was 264; the proportion of individual sufferers to the whole number being rather more than 1 to 4.

Of the 264 individuals specified, 125 were males, and 139 were females; 178, either on the present or on former occasions, have suffered from small-pox; 81 only have been vaccinated, whether successfully or not I found it impossible to ascertain; and but 5 persons out of the entire number have hitherto (June 1st, 1839) escaped variola, being, at the same time, unprotected by vaccination. Thirty persons have died of the disease, and in three instances death was caused by it on its occurrence a second time in the same individual. While, although 18 cases of the disease after vaccination are here recorded, no instance of death is alleged to have taken place under such circumstances. In nine cases small-pox occurred twice in the same persons, four of whom had been inoculated.

The cases of small-pox after vaccination were, in general, extremely mild; those of secondary small-pox, as generally intensely aggravated.

Of the former, it will be seen, by reference to the table (B, No. 1) that 10 are reported to have happened in one family. The following is the history of that family, in reference to this fact, as I wrote it down on the spot, from the lips of the mother. The paternal grandfather of the Bagleys is 78 years old; he was vaccinated 30 years ago, along with his son, who is now 44 years of age, and who had been previously vaccinated in the country—on both occasions successfully! The wife of the latter had had small-pox 35 years before. They had issue, 11 children, of whom one only was unvaccinated, and caught the disease recently; and another, an infant, died without contracting it. All the rest of the family—father, mother, and nine sons and daughters, imbibed the disease; neither the one who had had small-pox nor the ten who had been vaccinated, being suffered to escape. The only one enjoying immunity on all occasions being the grandfather.

The degrees of severity with which the disease attacked them respectively, may be learned from the following arrangement of the several cases.

Mr. Bagley, 44, twice vaccinated successfully; disease modified; no fever; only a few pustules.

Mrs. Bagley, 40; small-pox when 5 years old; disease, on its second occurrence, mild; pustules few.

Vaccinated when Infants.

Mary Anne Bagley, 24. Disease modified, but attended with considerable fever; recovery protracted.

Eliza Sophia Bagley, 22. Disease modified; from 60 to 70 pustules; slight fever.

James Daniel Bagley, 20. Disease modified; 17 or 18 pustules; no fever.

Sarah Bagley, 18. Disease modified; from 60 to 70 pustules; no fever.

Amelia Bagley, 14. Disease modified; 12 pustules; no fever.

Catherine Bagley, 12. Disease modified; about 30 pustules; no fever.

Charlotte Bagley, 9. Disease modified; 12 pustules; no fever.

George Bagley, 8. Disease modified; about 50 pustules; slight fever.

Elizabeth Bagley, 5. Disease very aggravated; eruption plentiful; fever alarmingly high.

All the remaining cases, except that of James Ryder, aged 25 years, were equally mild as the majority of the above. He had been vaccinated in North America, 24 years before, and was completely covered with the eruption. The pustules were those of *modified* small-pox. Attendant upon such extensive cutaneous disease there was, as might have been expected, considerable constitutional disturbance.

At the risk of appearing to be prolix, I

add a list of the other cases, and, if the preventive powers of the vaccine *remedy* be doubted by any, none, I think, will be able, after having glanced at that list, to question further its power of so modifying—even where it does not altogether exclude the operation of—the varioloid virus, as to render it almost, if not wholly, innoxious.

The cases marked with an asterisk fell under my own observation.

1. Mrs. Brailey's daughter, 11 years old, was vaccinated when an infant; had the disease extremely mild.

2.* Elizabeth Bolton, 11 years old; vaccinated 10 years before; disease modified; constitutional disturbance slight; eruption scanty; pustules modified.

3.* Charlotte Bushnell, 11 years old; only one indistinct cicatrix visible, on the left arm; vaccinated 10 years before; modified small-pox; a few small pustules thinly scattered over the face and arms; no constitutional disturbance.

4. Thomas Fake, 7 years old; vaccinated when six years old; had the disease one year afterwards; type modified; attack mild.

5.* James Gibbs, 27 years old; vaccinated when an infant; cicatrices almost effaced; modified small-pox; pustules very small, and tardy in appearing; only in a few instances distinctly marked; three days precursory fever.

6.* Henry Naunton, seven years old; vaccinated when five years old; three days of slight precursory fever introduced two small pustules.

7.* James Ryder, aged 25 years; vaccinated 24 years before; disease modified; eruption universal; constitutional disturbance excessive.

8.* William Turner, aged 19 years; vaccinated when 18 months old; numerous pustules, of the modified sort; little or no constitutional disturbance.

9. Eliza Bagley, 22;
10. Sarah Bagley, 18;
11. George Bagley, 8;
12. Catherine Bagley, 12;
13. James Bagley, 20;
14. Amelia Bagley, 14;
15. Charlotte Bagley, 9; and,
16. Their father, 44; all vaccinated when young. In all, the disease was modified and the eruption scanty.
17. Mary Bagley, 24; and,
18. Elizabeth Bagley, 5; the oldest and youngest of the children; the most remote from, and the nearest to, the dates of their undergoing vaccination. Severe cases, preceded by excessive fever, and terminating in slow recovery.

A comparison of this list with that of the cases of secondary small-pox, will show at once the superiority of vaccine over variolous inoculation; and even over the disease received naturally, as a precaution against the disease in its ordinary mode of attack, and in its confluent, or most malignant type.

1. Catherine Quill, aged 1¾; had the disease naturally, and mildly, when 1 year old, and recovered. Imbibed the poison a second time, 3 months after, and died from it.

2.* Alfred Waller, 9;

3.* Edward Waller, 6; had the disease together 3 years ago, and were, during the present epidemic (1838) again attacked; this second time with *confluent* small-pox. Edward died on the 11th day. Alfred recovered slowly.

4.* Harriet Waller, 15;

5.* Mary Anne Waller, 6; were inoculated with small-pox when infants; partook of the disease a second time on the present occasion. A few days precursive fever ushered in a scanty eruption of distinct pustules. Disease, in both cases, mild.

6. James Brown, 1 year old; inoculated with small-pox; caught the disease a second time, in a few months after, and died of the second attack.

7. The mother of Anne Bagley had the disease twice, once when a girl, 5 years old, and again, after a lapse of 30 years. Disease, on its recurrence, mild.

8.* Elizabeth Brailey, 9 years old; had small-pox when 2 years old, the depressions left by which were so evident that the precursive fever, which was excessive, was never suspected of being preliminary to another attack of the disease, until the appearance of the eruption.

Hence it would appear that while in 18 cases of small-pox occurring after vaccination, only 3 were characterised by any severity of symptoms, and all recovered from the secondary disease;—in 8 cases, on the other hand, of small-pox occurring twice in the same individuals, 5 were marked with great severity, and three proved fatal!

The number of cases in which the disease proved fatal was 13 out of the 73 registered by me; three of these were dying when my assistance was first applied for; the first died in four, the second in eight, the third in twelve hours after the order for medical relief was obtained. Deducting these from the list, the proportion of deaths to recoveries was as 1 to 7; and if I add to this, seven other cases in my private practice, in all of which the result was favourable, and deduct the eight cases modified by prior vaccination, a no less favourable conclusion remains; and one the more satisfactory when contrasted with that stated in the last Report of the Small-pox Hospital, where the proportion of deaths to recoveries is as 1 to 4, or 25 per cent., including all the cases of modified small-pox.

Out of the total number of 178 cases collected by me, including 18 of the disease in its modified state, there were only 30 deaths, or a fraction more than 1 to 6. Deducting the 18 from the 178, the proportionate mortality

would increase, and become 1 to every 5½. It is certainly true that, in a greater number of cases, *there might be* found a larger proportion of deaths. But, so far as my experience has yet gone, I am disposed to think the converse of the proposition true. And of this I am thoroughly satisfied:—*Small-pox is not the unmanageable disease it has been considered. Neither is it so utterly beyond the reach of remedies to affect its mortality as it has also been considered.*

The only two cases in which the friends permitted a post-mortem examination to take place, convinced me that, even in its worst form, variola is a malady much more subject to the control of the medical practitioner than I had previously imagined.

The first was the case of Richard Cook, 3 years old, residing at 13, Collingwood-street. In the dissection I was assisted by Mr. Stephens, of the King's-road. The mouth, larynx, trachea, and bronchiæ, were painted throughout with deep inflammation, except where these passages were spotted with an apparently aphthous ulceration. The trachea and both bronchiæ were completely choked with thick, viscid mucus, partially mixed with pus. The œsophagus was in a similar condition. Spots of inflammation, which, in some places, had terminated in gangrene, were found in different portions of the small intestines, and these, as well as the stomach, were loaded and even distended with food! Distinct pustules occupied the larynx and the rectum. The state of the intestines alone, or the condition of the air-passages, would sufficiently account for the death of this child. The diseased appearances in both rendered his recovery an impossible thing.

In the other case, that of Diana Clarke, aged 4 years, residing at No. 1, Augusta-court, I was assisted by Mr. Robert George Smith, a very promising and diligent student of St. George's Hospital; and the examination extended throughout the whole of the alimentary canal as well as to the air-passages. Here, also, the inflammation and eruption had spread beyond the skin to the submucous tissue lining the mouth and fauces, and were continued into the larynx and pharynx, the trachea and bronchiæ, and along the œsophagus, stomach, and small intestines. All these parts were more or less affected with ulcerative inflammation, while the larnyx and trachea were studded with pustules, as distinctly marked, although upon a smaller scale, as any of those upon the surface of the body. Here, likewise, the air-passages were filled with pus and mucus, and this child, like the other, died in a state of suffocation.

While reflecting upon these cases, and upon the diminished tolerance of bloodletting in inflammations of the *mucous* membranes, of which this disease was clearly one, I happened to take up a volume which had gone unread for many years, the "Lectures," originally published in THE LANCET "on Practical and Medical Surgery," of my deceased friend, the late Thomas Alcock, Esq.; and was delighted to find that his ample experience, and accurate researches went to confirm the conviction I had arrived at, that small-pox ought not to be, if judiciously treated from the beginning, the fatal disease it is.

His observations, "the Results of a Series of Investigations on the Inflammations of the Mucous Membranes of the Organs of Respiration," and rightly believed by their author "to be of great practical value," were first communicated to the profession in May and June, 1820, in the "Medical Intelligencer," a publication no longer in existence. In 1830 he republished them with his lectures, "having had no occasion to change the opinions expressed." His concluding remarks are so completely borne out by the facts which have fallen under my own observation, that I cannot refrain from repeating them here.

He states it "as a general fact, that the danger of small-pox has been in the ratio of the laryngeal, tracheal, and bronchial inflammation, and that this inflammation has usually borne a strict relation to the aphthous eruptions (or what would have been pustular eruptions if situated on the skin), which are to be found in the throat. A reference, therefore, to the state of the throat in the earliest days of the eruption, has formed an almost unerring guide to the future practice; and in nearly all cases of confluent small-pox, when seen thus early, a decidedly depletory and antiphlogistic system of practice, has conquered the disease, and saved the person's life. So certainly has this treatment answered the intended purpose, that in many cases the disease has been cut short, the eruptions have run through their course more rapidly than under ordinary circumstances, the secondary fever, as it has been called, has not occurred, and the person's countenance has been left free from pits, or the marks have been comparatively slight.

"I may add to this, that, if called in during the progress of the fever which precedes the eruption, a similar mode of treatment, that is, treating the fever in the mode recommended by Dr. Armstrong for the cure of common fevers, will almost invariably prevent the disease from becoming confluent at all."—*Lectures*, p. 129.

The treatment which I have found applicable to almost all cases of confluent small-pox, and, when resorted to sufficiently early, with nearly unvarying success, is,—during the initiatory fever, *one general bloodletting*, ad deliquium, the patient being placed in the upright posture. This will relieve the congested vessels. While the febrile heat continues, *the cold affusion* is an admirable adjunct to bloodletting. By promoting evaporation from the surface, it helps to dimi-

nish the vascular congestion; and to relieve the capillary vessels in the interior tissues, by determining the blood to the surface. I was led to its adoption on the first blush of erythema on the cheeks, that sure precursor of variola in its confluent type, in the case of a very young child, Ellen Heyward, who was blessed with an intelligent and wise woman for a mother; and she, though somewhat startled by the novelty of the application, not only submitted to its use, but was indefatigable in sponging her child throughout the whole of the febrile stage of the disease. The life of her offspring rewarded her faith and her patience. It was the very worst case I ever saw, and its recovery was, therefore, the more remarkable. However, in reference to this proposed remedial measure, I may mention that, on the occasion of a visit to the Small-Pox Hospital, early in the present year, Dr. Gregory informed me he had employed it at one time until he lost two or three patients under its use, from attacks of pleuritis. What *necessary* connection should exist between this remedy and pleuritis, it would be difficult to conjecture. That pleuritis itself is by no means, necessarily, a fatal complaint, is tolerably certain. And I cannot help thinking that a due measure of attention to the idiosyncrasy of the patient, and of ordinary care and caution in the application of cold to the surface, would obviate the objection started by the above occurrences. To me it furnishes no valid objection to say that, because a patient having variola complicated with pleuritis, died of one or other, or both diseases, therefore the application of cold to the burning surface in the first or fever stage of small-pox, is an experiment not to be thought of. Where experience is wanting we are warranted in reasoning by analogy; and believing small-pox and scarlatina, in their first stages at least, to be analogous diseases, and finding that the cold affusion was justly esteemed orthodox practice in the latter complaint, I deemed myself justified in extending its application to the former, and in no single case have I had cause to repent, or even to stand in doubt of the propriety of having done so.

Immediately on the outbreak of the eruption, and where the erythematous cheek indicates the confluent form of the disease, even before the appearance of any eruption at all, *local bleeding by leeches* must be had recourse to, and repeated upon every recurrence of symptoms betokening inflammation of the mucous membranes of the respiratory organs.

The next remedy to bloodletting and to cold, is *antimony*. It is to the mucous membranes in a state of inflammation what mercury is to the serous. And, besides diminishing the inflammation of these membranes by the effect it produces on the circulation, it has a further beneficial tendency by indisposing the patient for cramming, a very pernicious but favourite mode of practice among the ignorant in cases of this disease. I may here notice a curious fact in the operation of remedies, illustrative of a general principle, first applied, I believe, by Dr. Marshall Hall, in the case of bloodletting. I am not aware that he, or any one, has deduced it as a general principle in other cases, but it is undoubtedly true with other remedies as well as venesection; and I would propose it as an axiom in the use of mercury, and in the use of antimony also, that *the tolerance of the remedy is the indication of its necessity, and the measure of the extent to which it may be employed.* In diseases where mercury produces a specific effect, it may be it requires to be pushed to an extent which, in other circumstances, would be destructive to the patient. In laryngeal, tracheal, and bronchial affections, every practitioner knows that a full dose of tartarised antimony for an adult, and sufficient ordinarily to produce vomiting, may be given to an infant in arms, without so much as exciting nausea. The fact is notorious in croup. I believe the fact to be as certain in small-pox, and have employed this remedy, combined with mild saline aperients, in doses of from one to three grains of tartar emetic every four hours, to very young children, with only the result of slight nausea being excited. Aperients are the only remedy which remains to be noticed, and I notice them to recommend the substitution of saline for mercurial purgatives in this disease. So far as tissues are concerned, its seat is, essentially, the mucous tissues. Mercury is contraindicated in all inflammations of the mucous membranes. It is positively poisonous in inflammation of the mucous membrane of the intestines, and we must never forget that in small-pox, the mucous membrane of the intestines is frequently involved in the inflammation, and sometimes exhibits the eruption.

That much remains to be discovered in order to the more successful treatment of this disease, I freely admit; but that, even with our present knowledge, the ratio of its mortality may be materially diminished, I am not less free to affirm. Some of the causes of the present lamentably large proportion of deaths I shall have occasion to notice when considering the third division into which my researches have led me.

II.

The following table (C) will illustrate the second branch of the inquiry.

From it we gather that 167 cases of small-pox were treated during the twelve months included in the report, by the medical officers of the parish, and by the medical officers of the dispensary.

Of these, 35 only were dispensary patients, while 132 were parochial paupers. The

latter were divided according to their respective localities by three districts. In the first of these districts, the eastern, 15 cases were treated; in the second, or northern, 46 cases were treated, including 15 in the workhouse; in the third, or southern, 73 cases were treated, by the medical officers severally.

Of the total number 45 died, or upwards of 1 in 4.

116 were under 7 years of age; other 38 between that age and 21 years; while only 11 persons attacked with this disease were more than 21 years, and of these 1 was 75 years old.

TABLE A.—Showing the Number, Ages, and Sex of the Small-pox Patients, attended as Paupers, in the District of South Chelsea, between the 2nd of June, 1838, and the 1st of June 1839, inclusive; also, the Number of Fatal Cases, and of Cases occurring after a previous Attack, and after Vaccination.

AGES.	Numbers.	Sex.		Deaths.		Small-Pox after Vaccination.		Deaths from Small-Pox after Vaccination.		Small-Pox occurring twice in the same persons		Deaths from Small-Pox on its second occurrence.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
One year and under*.....	15	7	8	1	1	—	—	—	—	—	—	—	—
Above 1 and under 2 years	11	3	8	2	—	—	—	—	—	—	—	—	—
Above 2 and under 4 years	8	6	2	2	—	—	—	—	—	—	—	—	—
Above 4 and under 5 years†	7	3	4	2	3	—	—	—	—	—	—	—	—
Above 5 and under 6 years	3	1	2	—	—	—	—	—	—	—	—	—	—
Above 6 and under 7 years‡	13	8	5	2	....	....	....	....	....	1	....	1	—
Eight years old.....	3	2	1	—	—	—	—	—	—	—	—	—	—
Nine years old	4	2	2	....	....	....	....	....	....	1	1	—	—
Ten years	1	....	1	—	—	—	—	—	—	—	—	—	—
Eleven years.....	3	....	3	....	....	....	2**	—	—	—	—	—	—
Twelve years.....	1	....	1	—	—	—	—	—	—	—	—	—	—
Nineteen years.....	1	1	....	....	....	1§	—	—	—	—	—	—	—
Twenty-two years.....	1	1	—	—	—	—	—	—	—	—	—	—	—
Twenty-five years	1	1	....	....	....	1‖	—	—	—	—	—	—	—
Twenty-seven years.....	1	1	....	....	....	1¶	—	—	—	—	—	—	—
TOTALS.....	73	36	37	9	4	3	2	—	—	2	1	1	—

* One of these two deaths occurred in the case of William Lockyer, aged eight months, residing at 95, Church-street, and was the result of improper treatment, arising from the mother's fears.

† Of the four deaths occurring at this age, two, Jane Naunton, residing at No. 4, Lordship's-place; and Thomas Mews, residing at No. 6, Paradise-walk; were dying when I was called in to attend them, and expired in less than twelve hours after; and one, Maria Gillard, living at No. 3, Rising Sun-court, was also dying, and expired within twenty-four hours.

‡ One of the two deaths at this age occurred in a boy named George Moody, residing at No. 3, White Hart-court, whose mother pertinaceously refused to subject him to the antiphlogistic treatment prescribed; and to her obstinacy I ascribe his death, and, subsequently, the death of a younger brother, aged two years, who died under the care of his —— grandmother, her skill in the management of this disease being considered "better than any doctor's."

§ All the family of this boy, residing at 21, Riley-street, who, with another brother (‖) had had the disease three years before, were previously inoculated for small-pox. The two boys, Alfred and Edward Waller, had the disease, upon the present occasion, in its confluent form; and their two sisters, Harriett, aged 15, and Mary Ann, aged six years, were slightly sprinkled with a few distinct pustules.

¶ This little girl, Elizabeth Brailey, 12, Calthorpe-place, had the disease seven years before, and was a good deal pitted with the marks of the former attack. In her, also, the second attack, which was ushered in with excessive constitutional disturbance, assumed the "confluent" type, and jeopardied her life for several days.

** The first of these cases, Elizabeth Bolton, residing at No. 5, Collingwood-street, had been vaccinated ten years prior to the present attack. The disease was modified, very mild, and accompanied with but little constitutional disturbance. In the other case, Charlotte Bushnell, residing at No. 1, Church-street, there is only a very faint trace of one cicatrix, on the left arm, visible. The disease with her was very slight; she had no fever, no constitutional disturbance, and only a few small pustules scattered, far and wide apart, over her face and extremities.

TABLE B.—Table of the Families for whom Parochial Medical Relief was ordered, in June, 1838, and the 2nd day of June, 1839, inclusive; with the Number of Members inoculated with, or attacked by, Small-Pox; subject to attacks after Vaccination, or

N° of Families.	Names.	Residences.	N° of Members in each Family.	Males.	Females.	Vaccinations.	Cases of Small-Pox, naturally or by inoculation.
1	Bagley	21, Bull Walk	13	4	9	11	2
2	Benson	12, Royal Hospital Row	5	2	3	1	4
3	Bilson	27, Riley Street	7	3	4	2	5
4	Bolton	5, Collingwood Street	8	4	4	2	6
5	Brailey	Calthorpe Place	4	2	2	2	2
6	Brown	Lordship's Place	4	2	2	.....	4
7	Burney	11, Wellington Street	7	3	4	.....	7
8	Bushnell	Church Street	3	1	2	2	1
9	Canty	3, Anderson's Yard	5	4	1	.....	5
10	Clarke	1, Augusta Court	4	2	2	1	3
11	Cook	Manor Gardens	6	3	3	.....	6
12	Cook	Collingwood Street	13	8	5	.....	13
13	Cushley	Lordship's Place	7	3	4	2	5
14	Downer	Millman's Row	4	2	2	.....	4
15	Dunn	3, Bull Walk	3	2	1	1	2
16	Elphick	3, Manor Street	5	2	3	1	4
17	Fake	1, Garden Row	6	2	4	1	5
18	Fryer	6, Bull Walk	6	1	5	3	3
19	Gentry	World's End Passage	1	1	..	.....	1
20	Gibbs	Botanical Gardens	7	5	2	3	4
21	Gillard	Rising Sun Court	8	2	6	.....	7
22	Goldsborough	12, Turk's Row	5	4	1	2	3
23	Goodsmith	8, Castle Yard	4	3	1	.....	4
24	Hainsley	Church Place	4	2	2	1	3
25	Heath	19, Queen Street	7	4	3	6	1
26	Heyward	Rising Sun Court	6	1	5	5	1
27	Lightfoot	4, Bull Walk	8	4	4	2	6
28	Lockyer	95, Church Street	8	4	4	3	5
29	Mews	6, Bull Walk	8	4	4	.....	8
30	Moody	White Hart Court	5	3	2	1	4
31	Mooney	Winks's Buildings	5	2	3	3	2
32	Moy	Garden Grove	9	5	4	3	5
33	Naunton	4, Lordship's Place	5	2	3	1	4
34	Patience	Rouse's Gardens	4	2	2	.....	3
35	Quill	Rose & Crown Gardens	5	1	4	.....	5
36	Ryan	7, Winks's Buildings	4	1	3	3	1
37	Ryder	44, Paradise Walk	3	1	2	1	2
38	Sells	Church Place	7	4	3	4	3
39	Stone	3, Manor Street	2	..	2	.....	2
40	Taylor	15, Queen Street	7	5	2	3	4
41	Turner	5, Manor Street	10	5	5	5	4
42	Waller	21, Riley Street	6	3	3	.....	6
43	Waller	6, Church Street	2	..	2	.....	2
44	Warrener	Bull Walk	8	5	3	4	4
45	White	Bull Walk	6	2	4	1	3
			264	125	139	80	178

cases of Small-Pox, in the Medical District of South Chelsea, between the 2nd day of composing each Family, and their Sex; of individuals protected by Vaccination; previous Variola; and Victims to the Disease.

N° of Deaths from Small-Pox in each Family.	Number of Small-Pox Cases.			Number of Deaths.		
	Occurring after Vaccination.	After Variolous Inoculation.	After a previous attack of the same Disease.	From Small-Pox occurring naturally.	From Small-Pox after Vaccination.	From Secondary Small-Pox.
.....	10	1	—	—	—	—
—	—	—	—	—	—	—
1	.....	.....	.....	1	—	—
1	1	.....	.....	1	—	—
.....	1	.....	1	—	—	—
1	.....	.....	1	.....	.....	1
—	—	—	—	—	—	—
.....	1	—	—	—	—	—
1	.....	.....	.....	1	—	—
1	.....	.....	.....	1	—	—
2	.....	.....	.....	2	—	—
3	.....	.....	.....	3	—	—
3	.....	.....	.....	3	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
2	.....	.....	.....	2	—	—
1	1	.....	.....	1	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
.....	1	—	—	—	—	—
1	.....	.....	.....	1	—	—
1	.....	.....	.....	1	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
1	.....	.....	.....	1	—	—
1	.....	.....	.....	1	—	—
2	.....	.....	.....	2	—	—
1	.....	.....	.....	1	—	—
—	—	—	—	—	—	—
1	1	.....	.....	1	—	—
—	—	—	—	—	—	—
1	.....	.....	1	.....	.....	1
—	—	—	—	—	—	—
.....	1	—	—	—	—	—
2	.....	.....	.....	2	—	—
—	—	—	—	—	—	—
.....	.....	1	—	—	—	—
1	1	.....	.....	1	—	—
1	.....	2	2	.....	.....	1
—	—	—	—	—	—	—
1	.....	.....	.....	1	—	—
—	—	—	—	—	—	—
30	18	4	5	27	.....	3

TABLE C.—Table of the Age, Distribution, and Result, in 167 Cases of Small-Pox, which were either attended as Paupers by the Medical Officers of the Parish of St. Luke, Chelsea; or, gratuitously, by the Physician and other Medical Officers of the Chelsea, Brompton, and Belgrave Dispensary.

AGE.	DISTRIBUTION.												TOTALS.			ANOMALOUS CASES OCCURRING AFTER					
	Dispensary Patients.			Pauper Patients.												Vaccination.			Variolous Inoculation; or, a previous attack of Small-Pox.		
	Over the entire Parish.			Eastern Division of Chelsea.*			Southern Division of Chelsea.			Northern Division of Chelsea.											
	RESULTS.																				
	N° of Cases	Deaths	Recoveries	Cases	Deaths	Recoveries	Cases	Deaths	Recoveries	Cases	Deaths	Recoveries	Cases	Deaths	Recoveries	Cases	Recoveries	Deaths	Cases	Recoveries	Deaths
Within Twelve Months	4	2	2	....	....	....	8	2	6	8	4	4	19	8	11	—	—	—	—	—	—
One year old and under Two	6	2	4	2	2	....	11	2	9	2	2	....	20	8	12	—	—	—	—	—	—
Two years old and under Three	2	1	1	1	....	1	6	....	6	4	2	2	13	3	10	—	—	—	—	—	—
Three and under Four	4	....	4	2	1	1	9	2	7	5	2	3	20	5	15	—	—	—	—	—	—
Four and under Five	4	1	3	3	1	2	7	5	2	5	3	2	19	10	9	—	—	—	—	—	—
Five and under Six	3	1	2	....	....	....	3	....	3	6	3	3	12	4	8	—	—	—	—	—	—
Six and under Seven	3	....	3	1	1	....	7	2	5	2	1	1	13	4	9	....	....	—	1	.....	1
From Seven to Ten inclusive	4	1	3	1	....	1	13	....	13	6	....	6	24	1	23	1	1	—	2	2	—
Above Ten and under Fourteen	2	....	2	2	....	2	5	....	5	2	....	2	11	....	11	3	3	—	—	—	—
Above Fourteen and under Twenty-one	....	....	....	....	....	....	1	....	1	2	....	2	3	....	3	1	1	—	—	—	—
Within Twenty-one and Thirty	2	....	2	1	....	1	3	....	3	1	....	1	7	....	7	2	2	—	—	—	—
Above Thirty and under Forty	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forty and under Fifty	1	1	....	....	....	....	....	....	....	2	....	2	3	1	2	—	—	—	—	—	—
Seventy-five	....	....	....	....	....	....	....	....	....	1	1	....	1	1	—	—	—	—	—	—	—
				•	•	•							•		•						
				•	•	•							•		•						
	35	9	26	15	5	10	73	13	60	46	18	28	167	45	122	7	7	0	3	2	1

NONE.

* The Ages of two children are not recorded in this Division.

THE

APOTHECARIES' COMPANY VERSUS GREENOUGH.

ACTION IN LANCASHIRE

FOR PRACTISING AS AN

APOTHECARY IN ENGLAND

WITHOUT THE LICENCE OF

THE APOTHECARIES' COMPANY.

VERDICT FOR THE DEFENDANT.

MEANING OF THE WORD "DISPENSING."

DOUBTFUL HABITS OF DRUGGISTS BEFORE THE YEAR 1815.

(*Abridged from the "Liverpool Albion" of Aug. 26th, 1839.*)

THIS was a special jury case, tried at the Lancashire Summer Assizes, before Baron MAULE. The action was brought by the Master and Wardens of the Apothecaries' Company of London, against Henry John Greenough, a chemist and druggist, at St. Helen's, for practising as an apothecary.

Mr. CRESSWELL and Mr. ROBINSON, counsel for the plaintiffs, and Mr. WATSON for the defendant.

Mr. CRESSWELL stated the case. He said that the plaintiffs had not brought this action to gratify any personal feeling, or reflect any injury on the defendant, but simply to discharge a public duty, and protect her Majesty's subjects from empirics, a duty of very considerable importance, but one which they could not exercise without acting what seemed an ungracious part, though they had no great desire to put themselves forward on such occasions. But in instances where a party had violated the statute, they would be guilty of a great dereliction of duty if they did not prosecute. The Apothecaries' Company of London had been in existence for many years before they had authority to interfere with such persons, but in 1815 a statute was passed to restrain ignorant persons from giving medical advice. By that Act a Board of the Apothecaries' Company was constituted, to examine all persons intending to act as apothecaries, and restrain them from practising until they had received the license of the Board, under a penalty of 20*l.* for each infringement. From the time of the passing of that Act the Apothecaries' Company had, by degrees, become more strict in its examination for the license, and he would now show to what extent the education of the medical practitioner was to be carried. In the first place he had to serve an apprenticeship of five years; and then to attend three winter and two summer sessions in some school of medicine; as well as a vast number of lectures on chemistry, anatomy, physiology, botany, and medicine, through five whole sessions, in addition to the five years' apprenticeship, before they were *allowed to apply to be examined*. Unauthorised persons should not be allowed to creep into the profession. It was undoubtedly known how prone people were, in medicine, to trust to one who professed to be the curer, by one remedy, of all diseases. Some people took Morison's pills, and many thousands of pounds were paid yearly for the Government stamps. St. John Long professed to cure persons by rubbing their backs with blistering matter,—a course of treatment which terminated in the death of many persons. Another class took on themselves to practise, who were only chemists and druggists. Their proper sphere was to mix up and sell, not to administer. With respect to those persons there was a very common error, which the Company were desirous to make known, namely, that they might prescribe over the counter to persons who came into the shop, and that that was not practising as an apothecary. There was no doubt, however, that it was practising as an apothecary. From the habit of giving advice over the counter, it was an easy step to visit some patient, and, by degrees, regularly to take upon themselves the whole of the duties of an apothecary. Then there were others who practised as surgeons, and who, if attacked by the Company, said, "No; we do not practise as apothecaries, but as surgeons, and only give medicines as auxiliary to some surgical cure." However, that was an affair between them and the College of Surgeons. In this case there was nothing of that kind. The defendant was a chemist and druggist at St. Helen's, who had not confined himself to prescribing in his own shop, but had gone out to attend patients, not gratuitously and out of charity, as had been represented, but charging for his visits as well as his medicines. The cases which he had attended were not surgical cases, for one or two of them were typhus fever. He (the counsel) should exhibit some of the defendant's bills, and the Jury would find that he had charged as a regularly authorised apothecary. The Company sent to him a letter, desiring that he would relinquish the practice. No answer was returned. The Board then informed him that they had examined witnesses, and were about to proceed against him. Then, after the writ had been issued, and the proceedings had advanced to a considerable length, the defendant wrote to the Company a letter, in which he insinuated that it was his success that had induced his rivals in the town to complain of him, and stating that he had only paid visits out of charity and humanity, and had not exercised the art of an apothecary, although it would be shown that he had regularly charged his poor dupes for attending on them. He also promised, if the action were stopped, to cease going out and giving advice. The

* The Ages of two children are not recorded in this Division.

Company were quite willing to stay proceedings, keeping them suspended over his head, if he would not practise either at home or abroad; but he had not availed himself of that offer, and the consequence was, that the case had been brought into court.

Mary Owens examined, the wife of William Owens, at St. Helen's. John Gerard became a lodger in her house. He was taken ill on the 31st of January, and then sent for Mr. Greenough, who carried on a druggist's shop. He came in the evening. Mr. Greer was afterwards sent for, and attended Gerard until the 11th of February. Dr. Mac Leroy, of Farnworth, was also called in, on February 2nd. Mr. Greenough attended Gerard almost every day. She asked him what ailed Gerard, and the answer was that he had a pleurisy fever. Gerard was at last confined to his bed, and, whilst there, Greenough went up to see him. The medicines came from Mr. Greenough's shop. The defendant gave the medicines to her. Sometimes the shopboy brought the medicines. He died on the 12th of February.

Cross-examined.—The shop belonged to the defendant's sister; he attended in the shop regularly, and conducted the business; over the door was "M. Greenough, chemist and druggist." When Dr. Mac Leroy was called in, he said that all had been done that could be.

Joseph Gerard, the father, stated, that he had paid Mr. Greenough, for attending his son, 3*l.* 9*s.* 6*d.* The defendant did not send in his bill; witness called at the shop to pay it. [The bill was put in, and a portion of it read; there were charges for visits (the rate being 1*s.* 6*d.* a visit), as well as for medicines furnished.] A person had called upon him to get hold of the bill, stating, that a wager had been laid upon it; he, however, refused to deliver it up, though he had shown it.

A number of other persons were called, principally poor persons, who proved that Mr. Greenough had attended either themselves, some member of their families, or some person with whom they were acquainted. In two or three cases the disease was typhus fever; one was inflammation of the lungs; another, a violent cold; and in all these cases Mr. Greenough had been successful in his practice, as they said on the cross-examinations of Mr. Watson.

Henry Marsh stated, that the defendant had informed him that he had a great many patients, and had upwards of three hundred bills to make out; but that he had great difficulty in getting paid, as his patients were principally poor people.

The bill produced was admitted by Mr. Watson to be in the handwriting of the defendant.

Mr. Cresswell intimated his intention of going for one penalty only.

Mr. Watson then addressed the Jury on behalf of his client. He gave "full credit" to the Company of Apothecaries for having instituted these proceedings out of a sense of public duty, and he said so, as they had not instructed Mr. Cresswell to cast any aspersions on the skill, competence, or ability of Mr. Greenough, who would have been an ornament to his profession, if he had only passed his examination. In 1815, the present law was obtained; but even now, if any person sustained an accident, a druggist might attend them as a surgeon, and administer medicines, and not be liable to a penalty under the Apothecaries' Act. Moreover, any man might put *doctor* at the end of his name, take a gold-headed cane in his hand, get into a carriage, and practise, as a physician, in any town in the kingdom. There was no law to prevent him doing so. With reference to chemists and druggists, there was a particular exception in the Act. The 28th section expressly provided that the penalty was not to apply to chemists and druggists in vending and dispensing drugs. Now, to him it appeared most difficult to tell where the business of the chemist and druggist began and where it ended; where the art of the apothecary commenced and that of the chemist terminated. Nearly every chemist and druggist sold, over the counter, medicines for any ailment; that is, you might go in to ask what was good for a cold, for example, and he would tell you, and mix what he considered best; and yet, according to his learned friend, that was practising as an apothecary. He (Mr. Watson) contended that this assistance was rendered as a chemist and druggist, and that the defendant was justified in so doing by the Act to which he had referred. His learned friend had illustrated his case by the most unfortunate instances—Morison's pills and St. John Long's practice. With respect to Morison's pills, they were a most efficient medicine, and he spoke in the presence of those who had used them (*laughter*); and as to St. John Long, he was a regular practitioner.

Mr. Cresswell.—He was a gentleman's footman.

Mr. Watson.—Whatever he was he carried on practice in one of the most fashionable streets in London, and was consulted by the most fashionable people. Mr. Watson then read the letter which had been addressed to the Company by the defendant, in which he said that he had practised entirely through a feeling of humanity. Now every word of this was fully borne out by the evidence. St. Helen's was very populous, and consisted principally of poor people; all who had been brought forward as witnesses were poor; many found that Mr. Greenough's practice had been extremely successful, and his rewards small, one witness having stated that he had a number of bills unpaid. The

defendant had affirmed that he was actuated only by humanity, and that was shown by a circumstance mentioned by one of the witnesses. A young woman was labouring under typhus fever; her friends sent to one medical man and he refused to go, and the second who was applied to also refused to attend, but sent his assistant. Then, knowing the skill of Greenough, they applied to him, and he did what any man of humanity would have done under the circumstances. It might be law to impose upon the defendant a penalty for having so acted, but the law was assuredly a hard one, though, of course, the Jury had nothing to do with the hardness of the case. The defendant admitted that he was a chemist and druggist, but he never induced a single person to apply to him as an apothecary. The Jury would say whether he had acted as an apothecary.

The JUDGE then summed up. He said that it was not pretended that the defendant had obtained a license; then the question arose whether he came within the meaning of the 28th section of the Act, which provided that nothing therein contained should be construed to affect the trade or business of a chemist or druggist in buying, preparing, compounding, dispensing, and vending medicines and compounds of drugs, either wholesale or retail; but that he shall and may use, and exercise, and follow his trade and business, in such manner, and as fully, and as amply, and to all intents and purposes, as the same trade and business was carried on before the passing of that Act. Now, had that trade been carried on previous to the passing of the Act? This was a question on which the Jury were more qualified to decide than he was, seeing that they were twelve, and he was only one. Besides, as a matter of fact, it was for the consideration of the Jury alone. His own belief was that, before the passing of the Act, the chemists and druggists had not, to any great extent, acted as apothecaries—that was to say, in prescribing for patients. The Jury would draw a distinction between the mere fact of prescribing and the right to prescribe, because the chemists and druggists might have occasionally usurped a privilege which, by right, did not belong to them. The defendant's counsel had not only argued that chemists and druggists were in the habit of prescribing, but he seemed to be of opinion that, by the words of the Act, there was a power preserved to them of so doing. The words were, "buying, preparing, compounding, *dispensing*, and vending medicines and drugs;" but the Act gave no definition of the word *dispensing*, leaving it to be construed by the practice of previous times.

Mr. CRESSWELL.—I apprehend, my Lord, that there is nothing in the word which means *prescribing*. Dispensing, in the profession, means making up the orders or prescriptions of another. "A Dispensing Chemist," for instance, is often seen put over the doors of the chemists' shops.

His Lordship apprehended that *dispensing* meant to *furnish*, to *give*.

A Juryman.—Would your Lordship be kind enough to describe explicitly the difference between the trade of a chemist and druggist and that of an apothecary?

The JUDGE.—There is no definition of it in the Act. The *apothecary* is entitled to prescribe, that is certain. To what extent the powers of the *druggists* go, depends upon *the meaning of the words I have quoted to you*, and *the practice in the trade before* 1815. That is a question of fact which you must determine among yourselves,—not from isolated instances, but from the wont of the trade.

The Jury retired to consider their verdict, taking with them a copy of the Act of Parliament. In three-quarters of an hour they returned, when the foreman read a paper, stating that, *in consequence of the absence of any evidence to show the practice of the trade*, they had found for *the defendant*.

The JUDGE.—You had better not give that in. Make your verdict definitive, either for the one or the other.

The Foreman.—Then we find for the defendant.

REGISTRATION OF BIRTHS.

To the Editor of THE LANCET.

SIR:—I am one of the many medical men who have undertaken the office of Registrar of Births and Deaths. I have no difficulty whatever in registering the latter, but in consequence of there being no compulsory clause attached to the directions for the Registration of the Births, I find it next to impossible to form an accurate register of births; and until that very great defect in the Act is remedied the difficulty must continue. I take great interest in the success of this most excellent measure, and am therefore desirous of doing the best that I can to carry into effect the intention of its framers. May I ask, then (through the medium of your valuable publication), of those of your numerous readers who have succeeded in making a return approximating to accuracy, what steps they have taken to effect that desirable object? I remain, Sir, your constant reader,

MEDICUS.

Aug. 31, 1839.

THE LANCET.

London, Saturday, September, 7, 1839.

The meeting of the "British Association for the Advancement of Science," at Birmingham, calls for a few remarks from us, as the Association has a section devoted exclusively to medical science, and the progress of the natural sciences exercises a direct influence upon medical theories, medical practice, and medical investigation. There is no section of Law or of Theology, and it is remarkable that the learned professions, excepting that of medicine, remain indifferent to the progress of education and general science, or hold dogmas which are hostile to the results of experience. There is no *science of law*; the lawyers never cultivate philosophy. The theologians have contested all the best established principles of natural philosophy. They persecuted Roger Bacon, and attempted to stifle experimental philosophy in its cradle; they imprisoned Galileo, and, chaining the wings of reason for a while, strove to render it the slave of appearances, that their mythology might stand unconfounded. But the divine spirit could not be quelled; and the familiars and friends of darkness were dispersed by the still small voice, "It moves," —the earth moves. The investigations of geology—of the formation of continents and seas—of the uplifting of hills—of the order of succession of plants and the zoological generations, met with obstacles in the same quarters. It was strenuously insisted, that all the geological phenomena observed were the effects of the Universal Deluge. Men of scientific pretensions lent themselves to the delusion, and undertook the ungrateful task of reconciling geological facts with the letter of the Mosaic relation. All honest and intelligent theologians have now, however, abandoned the positions occupied by Dr. Ure, and the pseudo-philosophers; and the Rev. W. Vernon Harcourt, the President of the Association, in his manly address, has disposed of the question, and of all the clamours and errors of bigotry, demonstrating at once the invincible energy of truth, and its harmony with righteousness and faith, rightly interpreted. "We are not," he remarks "all competent to judge between the theory "of Copernicus and those which preceded "it; but we determine against the seeming "evidence of our senses, and against the "letter of Scripture, because we know that "competent persons have examined and de-"cided the physical question. Now, Gen-"tlemen, in geology we are arrived at the "self-same point; that is to say, a vast body "of the best informed naturalists have ex-"amined, by all the various lights of "science, and by undeniable methods of in-"vestigation, the structure of the earth; "and however they may differ on less cer-"tain points, they all agree in this, that the "earth exhibits a succession of stratifica-"tions, and a series of imbedded fossils, "which cannot be supposed to have been "so stratified, and so imbedded, in six days, "in a year, or in one thousand years, with-"out supposing, also, such numerous, such "confused, such promiscuous violations of "the laws and analogies of the universe, as "would confound not the science of geology "alone, but all the principles of natural "theology."

We have noticed this controversy, as science has been accused of subverting the national religion, when it was laying the foundations of established truth. In other countries these accusations would have faded in obscure seminaries, or have withered in the perishable pages of theological pamphlets. No portion of the political press of France would have assailed the sciences and their cultivators, or have made itself the instrument of superstition and prejudice, to check the progress of knowledge, although France is less indebted to philosophy and the physical sciences for the development of its resources, than England.

The discovery of the true composition of water is another recent controversy to which

Mr. Harcourt adverted. M. Arago, in a memoir of Watt (*Annuaire*, 1839), stated that Priestley was the first person who proved that the water produced by burning oxygen and hydrogen is equal in weight to the gases consumed; and that Watt was the first person who drew the conclusion that water is composed of oxygen and hydrogen. Priestley, however, expressly states in his works that he had "never been able to find "the full weight of the air in the water "produced by the decomposition;" and Cavendish's experiments constituted an elaborate demonstration of chemical facts, which Watt's casual reasoning did not supersede. It is deserving of remark that half a century ago a Birmingham mob—called a *Church* and King mob—demolished Priestley's tranquil home; burnt the library, the papers, and the philosophical apparatus, the fruits of many years of arduous study; so that a premature death overtook the labours and discoveries — though not the life—of that great and amiable philosopher. How strange that men should find delight in destroying the benefactors of mankind!

Professor Graham, the President of the Chemical Section, presented to the section specimens of *Latane*, the new metal, making the fifty-fifth elementary body now known. He considered that the *law of substitutions* —a happy generalisation of M. Dumas—and Liebig's *binary theory* of the constitution of bodies, formed the two great features in the recent progress of organic chemistry. By the law of substitutions, when chlorine acts upon organic compounds, for every atom that is abstracted in the form of hydrochloric acid an atom of chlorine is left in its place. In the oxidation of alcohol, the acetous fermentation, hydrogen is withdrawn, in the form of water, by combining with oxygen; and, at the same time, the hydrogen is replaced *by an exactly equivalent quantity of oxygen*. M. Regnault has succeeded in replacing the four atoms of hydrogen in olefiant gas by four atoms of chlorine.

We must notice an important practical suggestion of Professor Graham at greater length, as it may be the means of saving many lives. He observed that the *after-damp*, or carbonic acid, left in the atmosphere of a mine, after explosion, is supposed to occasion in many instances a greater loss of life than the explosion; at the same time it renders assistance impracticable. In many cases the oxygen of the air is not exhausted by the explosion, although, from the presence of five or ten per cent. of carbonic acid, it is rendered irrespirable. The atmosphere will be rendered respirable by withdrawing carbonic acid, and he suggested a method by which this might be effected. He found that a *mixture of slaked lime and pounded Glauber's salts, in equal proportions*, has a singular avidity for carbonic acid, and that air might be purified completely from that deleterious gas, *by inhaling it through a cushion of not more than an inch in thickness, filled with that mixture*, which could be done without difficulty. This lime-filter will be an additional source of security wherever the safety-lamp is necessary; and it should be invariably employed by persons who descend into a mine to afford assistance to the sufferers.

In the Section of Zoology and Botany, several interesting papers were read. Mr. Lankester controverted the opinion of Du Petit Thouars, that woody fibres are formed by the buds and the leaves, and sent down by them between the bark and wood of the tree. He had observed, in felled trees, the production of fibrous tissue, independently of leaves or buds. He had ringed several trees in the spring, when the sap was rising, and had cut them down in August: woody tissue was found connected with a cellular formation in both *the lower* and upper edges of the wound; the woody tissue being evidently formed subsequently to the ringing. The formation of knobs, called by Dutrochet embryo-buds, affords another argument against the theory. As the result of his investigation of vegetable *ossification*, Mr. Lankester concludes that the requisites for the formation of wood are, a living tissue, developing elongated fibres, a tissue forming

and depositing secreting matter, and exposure to the influence of external stimuli.

Mr. Forbes and Mr. Goodsir presented an interesting notice of zoological researches in Orkney and Shetland. The genus *holothuria* holds its British court in Shetland—and the king of the race is a splendid species, which the authors name *holothuria grandis*. It is fully two feet long when extended in the sea; and of a deep purple colour; it has ten triangular frondose tentacula, purple, spotted with white; its body, between the rows of suckers, is almost smooth.

The Section of Medical Science had for its President Dr. Yelloly. Dr. Macartney, Dr. Johnstone, and Dr. Roget, were the Vice-Presidents. Abstracts of a case of rupture of the duodenum, and of some other cases, were read by Sir David Dickson. Early in the week Mr. Middlemore, Dr. Foville, Professor Macartney, and Dr. Blakiston, read medical papers. Abstracts will be found in another page.

Dr. Addison produced meteorological observations made at Great Malvern during the years 1835—8. Great Malvern, in Worcestershire, has an elevation of about 500 feet. The mean height of the barometer was 29.386 inches. The mean temperature of Malvern was 47°7; the highest annual mean (1835) was 49.1; the lowest 46.5, in 1838. The mean dew point in 1835 was 44°7; in 1838 it was 42°4. The range of temperature during the four years was 75 degrees; namely, 9° on the 20th of January, 1838, and 84° on the 5th of July, 1836. The climate of Malvern is in striking contrast with that of *Mahabuleshwar*, a *convalescent station* of Bombay, situated near the western scarp of the Ghâts, in lat. 18° N., long. 73° W. This mountain chain varies from 1000 to 8000 feet in elevation; the table land of Mahabuleshwar averages 4500 feet. Dr. Murray, the medical officer in charge of the station, keeps the meteorological journal, of which an abstract was presented to Section A by Colonel Sykes. The mean temperature of 1834 was 67°3; that of the hottest month (April) 74°4; that of the coldest month (December) 62°3; the mean maximum (April) 82°2, and the mean minimum (December) 56°2. The mean monthly variation, or the range between the mean maximum and minimum, was greatest in April (15°5), and least in September (2°8); the mean variation for the year was only 9°5. The fall of rain was prodigious, being equal to *twenty-five feet two inches*; and this enormous mass of water fell almost entirely in the months of June, July (115 inches), August, and September, when the wind was south-west. General Lodwich, who transmitted Dr. Murray's journal, remarks:—"The "inches of rain are not less than 302. This "will astonish the philosophers, but it would "do more than astonish them had they the "opportunity of seeing and hearing the rain "fall in torrents through a dense fog or "mass of clouds, which lie upon the ground "for perhaps six weeks together, with a "temperature by no means cold, and with "little variation." The excessive fall of rain along the line of the Ghâts, it is said, does not seem to be incompatible with health, for the military detachment stationed permanently at Mahabuleshwar is not characterised by any unusual sickness; and statistical returns of the population on the hills are as healthy as those of the table-lands to the eastward. It is to be regretted that these returns were not given in support of the general allegation.

In the rules of the Association some alterations were made which are calculated to prevent the accession of new members; thus, in future, an admission fee of 1*l.* is to be required from all members admitted as annual subscribers, in addition to their annual subscription of 1*l.*

It appears that grants of money were made to the extent of 2790*l.* in aid of researches of various kinds. This is an excellent feature in the Association, but the Committee of Recommendations should be very jealously watched, in order to prevent jobbing, and to secure the equitable distribution of the funds among the working members. With-

out examining the subject very closely now, we may remark that the funds appear to flow in one direction, and into a very few hands. There are *seven* Sections:—A, Mathematical and Physical Science; B, Chemistry and Mineralogy; C, Geology and Physical Geography; D, Zoology and Botany; E, Medical Science; F, Statistics; G, Mechanical Science. Now, of the total sum voted (2790*l.*) not less than 1811*l.* found its way into the pockets of Section A; while the Section of Medical Science only obtained 125*l.*; and the same anomalous distribution of the grants has occurred ever since the foundation of the Association. It appears that 200*l.* were voted to a Committee consisting of Sir J. HERSCHELL, Mr. AIRY, and Mr. HENDERSON, for the reduction of *stars* observed at the Cape of Good Hope by LACAILLE; 500*l.* to Mr. BAILEY, Mr. AIRY, and Dr. ROBINSON, for the reduction of *stars* in the *Histoire Celeste*; 500*l.* to Mr. BAILEY, Mr. AIRY, and Dr. ROBINSON, for the purpose of extending the *Catalogue of Stars* of the Royal Astronomical Society, &c. &c. Astronomy is a science of the highest interest; but the stars have unquestionably obtained more than their fair share of the gold of the Association. The astronomers must practise some of the tactic arts of the old astrologers; and evidently possess an equivalent for the philosopher's stone, which attracts all the money within the sphere of Section A. In their excursions among the stars they have grown intimately acquainted with Mercury, and his light-fingered feats, or how is it possible that *one* "of the planetary seven" should gain such an extravagant proportion of the grants? We should like to know by what mathematical operation it is proved that this is a fair equation:—A, *equal* B and C, and D, and E, and F, and G, multiplied by 3. The list of grants is music, not merely in one key, but in one note—A, A, A,—to the end of the score. Mr. WHEWELL, Mr. BAILY, Mr. AIRY, Dr. ROBINSON, and Sir J. HERSCHELL, dispose of the greater part of the revenues of the Association; each great man in schedule A, like the *Holothuria Grandis* of the north, extends his ten long tentaculated arms in the waters, and every sucker in the endless rows of suckers, is incessantly draining the life-blood of the Association, with an avidity of appropriation which can stamp nothing but the incarnation of Acquisitiveness. The "purple colour" is as natural in these "splendid animals" as in an irresponsible, unaccountable alderman.

Last year the sum awarded for the encouragement of medical science amounted to *ten pounds ten shillings*; this year the grant has been increased ten-fold; next year let us hope that something more than the shabby sum of 125*l.* will be voted to the Medical Section; that the *Star*-gazers will observe a degree of decency in their demands; and make somewhat less free with the pockets of their humbler uncelestial brethren; we could mention a thousand inquiries in physiology, pathology, and vital statistics, of more importance than the determination of the exact place of every star in the firmament of Heaven.

THE LANCET of this week, page 863, contains a report of a trial at Lancaster, in which a druggist's assistant* was prosecuted for practising, in the north of England, as an apothecary. The worshipful Company of Bridge-street cannot allow this verdict to remain as it now stands, without having the subject discussed before the Judges, in a motion for a new trial. The motion, however, cannot be made until November next.

The questions which have been started in this cause are *not new to the pages of* THE LANCET. We have always contended that "the druggists' clause" would one day prove a stumbling-block to [illegible] of the Company, which might produce some fatal results to its interests as prosecutors in courts of law.

* The counsel in the cause seem wholly to have lost sight of the fact that the defendant was not professedly a druggist.

NERVOUS DELIRIUM, TREATED BY LAUDANUM INJECTIONS.

To the Editor of THE LANCET.

SIR:—In the following case of *delirium nervosum*, I successfully adopted the treatment recommended (first, I believe) by Dupuytren, viz., tincture of opium injections. During the time that I was a student at Paris I witnessed several cases of a like nature, treated in the same manner, with the happiest effects. No doubt the powerful influence of the opium clyster upon the nervous system is in consequence of its not being previously subjected to the digestive powers of the stomach, thus being absorbed into the circulation in an unaltered state. I am, Sir, your very obedient and obliged servant,

A. B. MADDOCK, M.D.

80, Judd-street, Brunswick-square,
September, 1839.

In the night of July 12th I was hastily summoned to attend A—e W—d, ætat. 25, of abstemious habits and nervous temperament. Her mother stated that she had that day quitted the service of Mrs. F., Devonshire-street, in consequence of having become *enceinte* by the footman. The fact of her shame being known, together with the loss of her situation, so much preyed upon the mind of the young woman that her senses quite deserted her. She presented, indeed, a sad spectacle of the misery which a deviation from virtue entails upon woman. The excitement was so great at the time I visited her, that it was with some difficulty she was prevented from laying violent hands upon herself. The head was cool, and there was a cold, clammy sweat upon the hands and feet; the pulse small and frequent; the pupils were contracted, but the eyes were not intolerant of light; the bowels not open to-day. From the history of the case, the delirium did not appear to me to be dependent upon any inflammatory action of the membranes or periphery of the encephalon, but a purely nervous affection; and I considered that *depletion*, which I have seen but too indiscriminately employed in delirium, was not here indicated; I therefore ordered the following mixture:—

Castor oil, one ounce; to be taken immediately.
Muriate of morphia, three grains;
Syrup of poppies, six drachms;
Distilled water, four ounces. Make a mixture, of which take a fourth part every four hours.

17. Continues very violent, and has been so the greater part of last night. The mixture was regularly given. The bowels have been freely relieved. The mixture to be continued.

18. Passed a bad night, and is almost unmanageable this morning; pulse very low and quick; the countenance much attenuated and altered since yesterday; appears worse in every respect. I now ordered fifteen drops of tincture of opium to be mixed with a little gruel, and administered every four hours, in the form of a clyster. In the evening she was more calm, and her mother (a particularly intelligent woman), said to me that she was sure great relief had been derived from the clyster; the bowels open; the clysters to be regularly continued.

18. Slept quietly, at intervals, during the night, and is sensible this morning; the pulse fuller, and the head and feet have regained their natural warmth; says that she feels "dreadfully exhausted," and complains of a great "bearing down" in her inside, and states that she is five months gone with child, and is afraid, from her feelings, that she is about to miscarry. Has evidently derived great benefit from the clysters, which, however, from her great improvement, I now discontinued. Prescribed as follows:—

Battley's sed. sol. of opium, eight drops;
Syrup of poppies, three drachms;
Distilled water, an ounce and a half. Mix; make a draught, to be taken every four hours.

20. Called up this morning by her mother, who stated that she believed her daughter to be in labour. Before I arrived a still-born child had been delivered. The placenta still remained, but was shortly afterwards naturally expelled. She appeared extremely dejected, and expressed her sorrow by tears and exclamations, that she should have miscarried, and said that it would "drive her mad again." The sedative draughts, as before prescribed, to be regularly taken. Late at night an attendant came to say that she was more violent than ever. Ordered the opiate clysters to be immediately resorted to.

21. Was quite composed by the clysters last night, and is sensible this morning; complains of great irritability and weakness, but is in no pain; the pulse low and extremely weak. Ordered a little warm brandy and water, and the following:—

Sesquicarb. of ammonia, fifteen grains;
Lemon juice, one drachm;
Syrup of oranges, half a drachm;
Tinct. of hyoscyamus, one drachm;
Water, an ounce and a half. A draught, every six hours.

22. Quite tranquil; slept for four hours last night; the pulse fuller, and head and feet warm. The medicine to be continued.

23. No delirium; slept well last night, and feels much stronger. From this date no untoward symptoms arose, and she gradually regained her former health and strength.

MEDICAL REGISTRARS OF DEATHS.

To the Editor of THE LANCET.

SIR:—The following article is taken from the "Hull Times" newspaper. The expressions therein attributed to you are so unlike what might be expected to come from you that I am at present bound to believe the whole to be a fabrication, or a gross perversion. I have read your remarks on the Registrar-General's Report, in THE LANCET, and shall feel obliged if you will state in your next publication whether the enclosed are your own words. I am, Sir, your obedient servant,

A MEDICAL REGISTRAR.

Hull, Aug. 18, 1839.

"BIRTHS, &c., REGISTRATION.—When the Report of the Registrar-General (Lord John Russell's brother-in-law) appeared, we pointed out some of its many absurdities. The following is the opinion of the system delivered by Mr. Wakley, M.P., and Coroner for Middlesex:—In the course of an inquest Mr. Wakley inquired of the district registrar whether he registered the deaths of still-born children? *Registrar:* 'No; but if I find out that they have but breathed five minutes in the world I do.' *Coroner:* 'But how is it possible that you can ascertain that fact?' *Registrar:* 'I ascertain it in the best way I can; sometimes the doctor is the informant.' *Coroner* (addressing the Jury): 'Really, gentlemen, this Act contains the greatest anomalies and absurdities that ever existed. It no doubt was instituted to assist the office of Coroner, as a check upon crime, but its object is defeated, inasmuch as a person may go to a registrar and tell him a lie to conceal a murder. Another great absurdity connected with it is that of allowing medical men and overseers of unions and parishes to become informants, and in many instances I find the former even Registrars themselves. The medical man, although a patient may die from his unskilful treatment, and the overseer of a union poor-house, although he may have starved a pauper to death, are, by being allowed to be informants, enabled to register their own good acts, taking care to keep their bad ones in the dark. I repudiate this as a most ridiculous and pernicious system, and not another session of Parliament shall go over my head without an attempt being made for affording a specific remedy for so flagrant an evil.'"—*Hull Times*, August 12.

*** The remarks are not correctly reported. Since the Act was first passed we have been of opinion that medical practitioners ought not to be the registrars of deaths, and that opinion becomes stronger as we observe the working of the present system. Surgeons and relieving officers who are required by law to attend the sick poor of the Unions, are the last persons who should be allowed by law to register the deaths of the persons who may have been placed under their care. It is a system which is truly obnoxious to every principle of prudence, to every dictate of common sense.

SOCIETY OF MEDICAL STUDENTS.

To the Editor of THE LANCET.

SIR:—I take the liberty of sending to you a copy of the prospectus of a Medical Society which is now forming under the name of the MEDICAL STUDENTS' FRIENDLY AND SCIENTIFIC ASSOCIATION; and I should feel particularly indebted by your giving me your opinion of the same. I am, Sir, your obedient servant,

A STUDENT OF UNIVERSITY COLLEGE.

August 28, 1839.

RULES.

To meet on every Friday evening, at eight o'clock, at an hotel.

The discussions to be miscellaneous, comprehending all those topics which interest the medical pupils of the metropolis, excluding, on that evening, scientific subjects.

The Society to meet, also, on Tuesday nights, for scientific discussion, at a place already provided.

The objects of the Association are,—

1. To establish a bond of friendship, and an unity of interest between all medical pupils.

2. To defend their rights and promote their interests under emergencies.

3. To afford to each other mutual assistance in obtaining professional knowledge.

N.B. To be open to all pupils, as members or visitors, from any of the medical classes in London. The meetings to terminate at ten o'clock.

*** The success of such an undertaking will depend entirely on the character and conduct of the parties who may be admitted as members. The objects of the promoters of the scheme are evidently benevolent and just, but we regret being compelled to state that in every instance within our knowledge, when a society of a similar nature has been established, it has proved a complete failure, and has brought upon its projectors only fruitless toil and unrecompensed anxiety. An hotel is not a judicious place wherein to hold the weekly meetings of a society of medical students.

VARICOSE CAPILLARIES?

To the Editor of THE LANCET.

SIR:—The attention of the profession having been drawn to the so-called varicose state of the capillaries in disease, I beg you will allow me to express my opinion that this misnomer, for such I deem it, by no means expresses the *first* stage, far less the essence of morbid processes: that stage consists, I believe, in different diseases.

1. In a *physical* change in the internal lining of the *true* capillaries.

2. In a *physical* change in the blood, or fluid contents of those vessels.

The immediate *effect*, in both these cases, is an arrestation of the flow of blood; the subsequent effect is, that which arises in every case of interrupted flow of blood,—*hypertrophy*,—augmentation in size and number of the vessels, especially the minute arteries, immediately *arrière* to the point of obstruction. Hence what is now termed the varicose state of the *capillaries*, but what ought to be termed *hypertrophy* of the *arrière* vessels, whether this consist in augmented size and number, change in form, &c. This effect is observed, 1. when a ligature obstructs the flow of blood through an artery, the collateral branches all becoming hypertrophied; 2. when inflammation or other disease obstructs the true capillaries (whence enlarged and new formed vessels); or 3. when the flow of the blood is interrupted along the veins (whence the true varicose state of those vessels in their *arrière* position.)

The principle is a general one, applying to all cases of obstruction in canals. The application of the principle to morbid processes is not less general.

Inflammation from *physical* causes consists in obstructed capillaries, from change in their internal surface. Multiplied abscesses in phlebitis, and multiplied tubera in certain diseases, arise from the arrestation of the morbid matters flowing with the blood, in the same true capillaries. *Obstruction* is the *first* link in the chain, *hypertrophy* the *second*, whilst a multitude of other processes follow in succession. I am, Sir, your obedient servant,

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August 29, 1839.

*** Our correspondent will bear in mind, that the discovery of a varicose condition of the capillaries has, as yet, only been announced, in print, in a manner that is premature. It has come out in the exposure of a literary bandit,—not recorded as a fact in science. The investigations of Mr. Kiernan, involving his explanation of the morbid changes, made known under the name of "varicose capillaries,"—their anterior and progressive history,—have yet to appear from the pen of the discoverer. Everything that is suggested by our correspondent may be correct, but he will recollect that the enlargement and flexure of the capillaries are the earliest facts that *the eye* has yet detected in the primeval stage of tumours. To *imagination* the antecedent theory of the pathology must for the present be indebted.

DOCTOR HAKE'S "DISCOVERIES."

To the Editor of THE LANCET.

SIR:—After the account you have given of Dr. Hake's plagiarism of a portion of Mr. Kiernan's discoveries, and the subsequent announcement in your Journal of the 24th of August, that the former had agreed to make an honourable amend to the latter,* I was not a little astonished to find Dr. Hake's pamphlet published exactly in accordance with his original advertisement. The time has, therefore, arrived for an examination of the respective pretensions of the parties, and I trust that you will not allow the matter to rest without an examination, which shall be sufficiently full and particular, to do them both ample justice, and to prove clear and satisfactory to the profession at large. It is quite clear to me that Mr. Kiernan's discoveries concerning morbid growths have not been fully comprehended by Dr. Hake; for it is doubtful whether Dr. Hake's pamphlet be in any way worthy of notice, excepting in connection with the grave charge which has been made against him. But there is a higher view, in which the matter becomes of great importance to the scientific world, since, if Mr. Kiernan's allegation be proved, it would tend to show the existence of a species of fraud which, if not peremptorily checked by the voice of public opinion, would be calculated to undermine some of our best feelings, and to interrupt all social intercourse among the cultivators of science.

To return to the matter contained in Dr. Hake's book. Independently of the charge of plagiarism already alluded to, I regret to observe that he has published the observations of others with all the air of an original discoverer, propounding them with a specious solemnity of manner, as if they were the exclusive property of himself and a Professor at University College, who has been long employed in treating the town with discourses on pathological anatomy, after

* Mr. North, as the friend of Mr. Kiernan, was informed by the plagiarist, in reply to a remonstrance, that he would alter the title of his "Treatise," and that it would or should contain very little respecting varicose capillaries.—ED. L.

the manner of the French, and promulgating the absurdities and errors of that school with a sort of philosophic gravity which is really too amusing to be altogether contemptible. But, as regards the charge against Dr. Hake, it is necessary to adduce the proof, and a few paragraphs from his pamphlet will be sufficient for this purpose. Among his discoveries and inferences we find the following, viz.:—

1. "Pus globules may be detected in the blood in all cases in which the system is affected with a local deposit of pus. In the last stage of phthisis the blood was found by Dr. Carswell and myself to contain no other globules than those of pus."—P. 10.

2. "These facts would favour the belief that pus was formed in the blood."—P. 10.

3. "The capillaries, in their healthy state, are of a uniform diameter, their size being about that of the blood globule. From this fact it may be implied that in all tissues which secrete pus, the capillaries are in a state of dilatation, for the pus globule is generally one-third greater than, to twice the size of, the blood globule; consequently the capillaries which secrete the former must be of a proportionate diameter. This simple truth opens to investigation the state of the capillaries through a large class of scrofulous affections, venereal and other abscesses, and suppurating surfaces of every description."—P. 13.

Now, I would beg to ask you* how far Dr. Hake is acquainted with a certain paper, "On the Frequent Presence, and on the Effects, of Pus in the Blood, in Diseases attended by Inflammation and Suppuration?" —(*Lond. and Edin. Philosoph. Mag.*, Sept. 1838.) This question is put because the attention of Dr. Hake was *expressly directed to the observations contained in that paper; and some blood in which pus globules might be expected to occur*, according to the views of the *author, was actually mentioned to Dr. Hake as at that time existing in a patient under treatment in a metropolitan hospital*,—at least if there be not some inaccuracy in the testimony of a person who heard the conversation, and who saw Dr. Hake, in consequence, with a certain *pathological* professor, instituting some observations on the blood in question. My informant is, moreover, very positive that he heard the information communicated to Dr. Hake, that Dr. Davy and Mr. Gulliver had announced the existence of pus globules in the blood of patients who were affected with pulmonary consumption.

Mr. Gulliver is the author of the paper in question, and he has very distinctly announced, from an extended series of observations and experiments, *the discovery of pus globules in the blood*, not only in cases where suppuration was to be detected in the tissues, but also in some inflammatory affections which were unattended with local deposits of pus. I believe, also, that he was the first to appreciate the vast importance of this contamination of the blood, its remarkable frequency, and its intimate connection with a great proportion of disease, and especially with that extensive group of maladies which is commonly denominated *Irritative Fever, Hectic, Sympathetic, Inflammatory*, and *Typhoid Fevers*. Hence, we see how much merit is due to Dr. Hake for the matter and its context numbered 1, in the preceding extract from his pamphlet, although the conjoint observation of Doctors Hake and Carswell, in which "the blood was found to contain no other globules than those of pus," must be allowed to be entirely original.

As to the extract numbered 2, the following observation from Mr. Gulliver's paper is remarkable:—"I have related instances of pus in the blood, independently of suppuration out of the vessels. The fact appears to be of some importance, for it must be inferred that the pus was not absorbed, but formed in the blood."—P. 201.

The remaining extract, numbered 3, from Dr. Hake's "discoveries," is singular, for the circumstantiality with which he is led to propound "a simple truth," and the "investigation," which he seriously assures us is opened by the announcement. The Doctor's claim to "this simple truth" will be duly estimated after a perusal of the following quotation from Mr. Gulliver's essay:—

"With regard to the correct observation of Müller, that the capillaries have only the diameter of a blood capsule, I shall on a future occasion show, from the result of experiments, that these vessels become sufficiently enlarged, during inflammation, to contain a row of pus globules."—P. 200.

As to Dr. Hake's other discovery of "a new form of the pus globule," if you will allow me, I would recommend him to direct his attention to the anatomy and physiology of certain entozoa infesting the liver and intestines of the lower animals. I should be sorry to see any discovery in medical science turn out, after all, to be nothing but a *flake;* but I can venture to assure you that this "discoverer" will learn the fact of various eggs occasionally containing double yolks, just like his "new pus globule," delineated in plate 6, figure 9. I was induced to purchase Dr. Hake's pamphlet, because he advertised, from its title-page, "the development of *the law and treatment*

* We have taken the liberty to alter the inquiry as it stood in the manuscript of "TIMOCRATES." First, because the querist is anonymous, and, secondly, because we cannot permit *questions* to be addressed in this Journal either to quacks, or to any one standing in the disreputable position of the person whom our correspondent mentioned in this sentence.—ED. L.

of morbid growths." It is your business, as the editor of a widely-circulated medical journal, to pronounce how far he has done either. I am, Sir, your most obedient humble servant,

TISOCRATES.

Sept. 1, 1839.

*** The facts announced in the paper of Mr. Gulliver shall find a place in the next LANCET. Dr. Hake seems even to have filched the word *molecule* from Mr. Gulliver, who applied it to indicate the elementary particle, or peculiar nuclei, of the pus globule.

ON THE

TREATMENT OF GRAVEL.

BY M. CIVIALE.

(Read at the Academy of Sciences, July 22, 1839.)

THE formation of gravel has generally been attributed, by those who have paid attention to urinary diseases, to the operation of chemical laws, and the means of cure have equally been directed to the destruction of the product thus formed, without any reference to the organic changes which favour their formation, or to the influence they exercise, by their simple presence, on the animal economy. Authors, in treating of calculous disorders, are too frequently in the habit of considering as the original disease that which in reality is merely an effect or result of one or more morbid states; and their chief care has been directed to discover some mode of eliminating the foreign body, without bestowing a due share of attention on the organic modifications under the influence of which it has been formed. Formerly writers asserted that gravelly affections were confined to warm climates, and that they were most frequent amongst elderly persons addicted to good cheer. Both of these errors have been corrected by more exact observations.

The chemical theory of the formation of gravel can only apply to the period at which the urine, having passed through a series of morbid states, is disposed to the deposition of gravel. But we must ascend a step higher in the investigation. What gives rise to this morbid disposition? What is the reason that in one case we find a predominance of uric acid; in another of the urate of ammonia; in a third, of the oxalate of lime; in a fourth, of the phosphates, &c.? Such are the questions which we must be prepared to answer if we desire to raise the treatment of calculous disorders above the level of empiricism. I have endeavoured to resolve these questions, and thus discover a rational mode of treatment, the beneficial effects of which have been confirmed by extensive experience.

Almost all the cases of gravel which we find recorded in medical works are incomplete, and this necessarily depends on the manner in which they have been observed.

A patient is affected with gravel: antiphlogistics, alkalies, &c., are ordered; the symptoms are relieved or disappear; the physician loses sight of his patient, and thinks that he is cured. But the affection returns at some distant period, and the patient seeks another medical attendant. He has now a calculus in the bladder or in the kidney. Such cases I witness every day. It is easy to explain their occurrence. The accidents occasioned by the gravel, or even by urinary calculi, are but temporary, and disappear of their own accord, after a certain lapse of time.

The main object of practitioners in the treatment of gravel has usually been to favour the discharge of the foreign substance through the urethra. Sometimes, in fact, we find that very large fragments of stone are passed through the canal, after lithotrity, without occasioning any pain or uneasiness. At other times a very small particle will give rise to the most agonising sufferings. This difference depends on the manner in which the patient has been prepared for the operation, by the employment of means calculated to diminish the sensibility of the urethra, &c.; and hence it was natural to employ similar measures in the treatment of persons affected with gravel. A variety of morbid conditions oppose the spontaneous discharge of gravelly concretions; the chief are spasmodic or organic contraction of the urethra; diseases of the prostate and neck of the bladder, and atony or paralysis of the bladder. In a patient not affected with gravel, these complications will render the discharge of urine slow and painful; with how much greater energy must they oppose the exit of a foreign body? I have treated a great many patients labouring under gravel who had before tried, without success, all kinds of remedies. On examining the urethra I frequently found that the canal was in a state of spasmodic contraction which had entirely destroyed its natural pliability. On removing this morbid state of the urethra, the calculous concretions were discharged with facility although no internal treatment had been employed. In slighter cases the gravel is expelled notwithstanding the spasmodic or nervous affection of the urethra, but its expulsion is attended with considerable pain and difficulty. This state is also speedily corrected by means calculated to remove the spasm or neuralgia of the urinary canal. These results I have obtained in a great number of cases where strict vegetable diet, enormous quantities of the alkalies, various mineral waters, &c., had been employed without advantage.

Stricture of the urethra is, it is well

known, a not unfrequent affection; hence an obstacle to the free passage of the calculous concretion. When the stricture is of old standing we discover its existence by various symptoms, especially the difficulty of making water; but in more recent cases the patient is able to make water well enough, although the canal is sufficiently contracted to impede the discharge of a small concretion, which is only effected by violent contraction of the bladder, and with great pain. As soon as the existence of such a stricture is ascertained, it must be attacked by the ordinary means, and then the passage of the gravel is no longer impeded. But should the stricture be more advanced the case becomes one of very great difficulty, and requires on the part of the sufferer extreme patience, on that of the surgeon great dexterity and experience.

The prostate is subject to a variety of diseases, most of which have the effect of changing the direction of the urethra, and diminishing its natural pliability. Hence the urinary concretions are, in such cases, usually retained in the bladder, and increase in proportion to the length of time which they are retained, and the tendency of the urine to deposit. Unless the surgeon be careful to remove this state of the prostate gland, or neutralise its influence, all medical treatment must be unavailing. Independent of the direct obstacle produced by organic disease of the prostate, or any tumour near the neck of the bladder, there is one which I would term *vital*, and which depends on increased sensibility and contractility of the urethra and neck of the bladder. This morbid sensibility is itself connected with some commencing disease of the prostate, or with urinary concretions; and the surgeon has thus to combat two distinct states, each of which acts on and augments the other.

The treatment which I have pointed out in cases of urethral neuralgia usually suffices here, but as the organic disease advances the contraction of the neck of the bladder persists, and concretions are retained. Under such circumstances I have recourse to lithotrity, for the removal of the concretions, after which the spasmodic condition of the urethra is combatted with greater success.

It sometimes happens that while the neck of the bladder is in a state of morbid contraction the body of the organ has lost more or less of its contractile power. This condition of parts is easily detected, yet we find nothing relating to it in works on the diseases of the urinary organs. In slight cases of this kind the irritability of the neck may be appeased by frequently passing a bougie, while the tone of the bladder is, at the same time, restored by injections of cold water.

But the various lesions just noticed not only impede the expulsion of urinary concretions, but also react on the kidneys in such a manner as to become a powerful exciting cause of gravel. Hence the treatment which I have indicated both diminishes the accidents and inconveniences of gravel, and contributes powerfully to prevent its formation.—*French Lancet*, July, 1839.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Birmingham, August 24th.

The proceedings of this Association for the present year, so far as the science of medicine is concerned, present the same dearth of interest which has characterised all antecedent meetings. Medicine, we presume, will be allowed, even by the migratory philosophers of the "British Association," to constitute an important branch of science, yet, in the statement of the finances for the year 1838-9, we find the munificent sum of *ten pounds ten shillings* set apart for the encouragement of medical studies, out of a sum total of 3906*l.* 11*s.* 1*d.* We do not mean to insinuate that the zeal of medical inquirers needs the stimulus of gold, but we may fairly deduce the rate at which the "advancement" of medical science is estimated by the British Association from the amount of reward offered for its encouragement.

We are indebted to the "Athenæum" for the following condensed account of contributions presented to the Section of Medical Science:—

"CASES BY SIR DAVID DICKSON.

"R. H. was admitted into hospital on March 3rd, at three o'clock, P.M., and died before midnight. The symptoms were, severe pain in the region of the cæcum and ascending colon; hurried, restless manner; pale, haggard, and anxious countenance; short, hurried, respiration; pulse weak, quick, and irregular. Depletion, followed by aperients, had been resorted to, without relief; leeching, fomentation, and warm purgatives, were resorted to without any relief, and, at half-past eleven, he sunk. It was ascertained that he had been fighting and wrestling three days before, when he was thrown with violence on the breach of a gun. Post-mortem examinations discovered the following lesions:—The stomach, bowels, and abdominal cavity were filled with gas; the descending colon was much contracted. A quantity of ingesta had escaped from four perforations in the duodenum; the mucous and muscular coats of this gut were pellucid and attenuated, as

if having undergone ramollissement and absorption, in consequence of which the peritoneal coat seemed to have given way, from distention or mechanical violence; the other viscera seemed generally healthy. It is known that sudden death frequently follows violent feats of tumbling and horsemanship, and, if examination were made, probably similar lesions would be found, or might exist without being detected, from the examination not being sufficiently minute; and thus this cause of death may more frequently occur than is generally supposed.

The other cases detailed were, one of ileus, occasioned by a membranous band; one of *intermittent* coma; a case of open *foramen ovale*, without cyanosis; and two or three other cases of minor import.

"Mr. Middlemore read a brief notice of the methods that have been used for the removal of capsular cataract, where the opaque capsule remains after absorption of the lens, for the purpose of introducing to the Section an instrument to facilitate the operation of extraction without interfering with the transparent structures of the eye. The instrument consisted of a needle, accompanied by a small forceps, the former capable of being withdrawn, leaving the latter to be fixed on the opaque membrane, and then withdrawn through the sclerotic, through which the needle had been introduced.

"In answer to a question from Professor Macartney, Mr. Middlemore stated that he had not yet practically proved the efficiency of the instrument.

"Mr. Middlemore also detailed a case in which the operation for artificial pupil was performed with success, and presented the patient to the Section for examination. About three years ago much injury was done to the face from an explosion of gunpowder. After recovery of the other parts, the eyes were found to be in the following condition:—the right was completely collapsed, the left was staphylomatous, the lens adhering to the staphyloma, but transparent; the lower half of the cornea was opaque, the upper half transparent, but vision destroyed, from the closed iris being opposite to the transparent portion of the cornea. The first effort was to remove the staphyloma, which was done by repeated puncturing of it with a fine needle. When the process of removal was so far completed as to permit the operation for artificial pupil, the iris was drawn through a small section of the cornea: it bled freely; but on the subsidence of the hæmorrhage and irritation, a sufficient and well-defined opening was found in the iris opposite the transparent portion of the cornea. The external portion of the iris was allowed to remain strangulated by the incision. The patient has already, in a great degree, recovered his sight, so as even to distinguish large print. He is still under treatment.

"Dr. Foville, of Paris, presented a paper, detailing the results of his researches on the Anatomy of the Brain. He commenced by urging the advantages of examining the structure of the brain by manual separation rather than by section, and gave credit to our countryman Willis, as being the first advocate of this method. He showed that the spinal marrow consists of two lateral portions, united by two commissures, between which, on the median line, there exists a double layer of white matter, analogous to the ventricle of the septum lucidum. He pointed out a remarkable difference of structure in the lateral parts of the spinal marrow, between the roots of the nerves, which is rendered most evident by maceration in water, after previous maceration in spirit. He next described the medulla oblongata. Tracing the crura cerebri to the brain, he showed them to consist of two parts,—the one going to the thalamus opticus, the other to the corpus striatum, where they constitute the white matter,—passing through the middle of those bodies, at the upper and outer limits of which they divide into three layers,—the superior, passing upwards and inwards, meets its fellows on the median line, and forms the corpus callosum; the second, or middle, is expanded in the hemispheres, which it constitutes, by lining the cineritious matter of the convolutions; the third, or inferior, and by far the smallest layer, passes to the outer side of the thalamus and corpus striatum, meets its fellow inferiorly, and, ascending with it, forms the septum lucidum. In addition to these facts he stated his more recent discovery, of several nearly circular systems of white fibres connecting the expansions of the superior part of the crus cerebri, which, from their connection with the olfactory and optic nerves, and also with the posterior part of the spinal marrow, appear to be essentially devoted to sensation. He also stated his fully confirmed observations, that the pathological affections of the thalamus influence the movements of the opposite side of the body, as those of the corpus striatum do those of the lower extremity. He noticed a similar connection between the lesions of the cornu ammonis and the motions of the tongue. He combated the idea that the frontal, parietal, and occipital protuberances, are dependent on special development of the corresponding parts of the brain, but are rather to be attributed to the distention of corresponding parts of the ventricles. After the reading of the paper, Dr. Foville demonstrated the leading facts alluded to, on the recent brain.

"Professor Macartney said, that his own researches confirmed those connections of the fibres of the brain pointed out by Dr. Foville; but that a more extensive and

minute connection between the different portions could be traced than those now demonstrated. He also stated that the roots of the spinal nerves, by a beautiful plexus, or net-work, prolonged on the spinal column, formed its outer wall, and communicated with those spinal nerves above and below.

"Dr. Foville was aware of those more minute communications alluded to; but on the present occasion he did not attempt to give a complete exposition of the nervous system, as being unsuitable, from its great extent.

"Dr. Evans stated, that having seen Dr Foville's pathological statements, as derived from his anatomical investigations, in the 'Dictionnaire de Médecine,' he had minutely examined the cases related by Lallemand, Rostan, and Andral, and found them to corroborate those views in almost every instance.

"Professor Macartney read a paper 'On the Means of repressing Hæmorrhage from Arteries.' He stated that the barbarities practised by the older surgeons, such as burning and searing, instead of the ligature, proceeded from the adoption of the false theory, that a certain amount of inflammation was necessary to the healing process, and, although modern surgeons are easier satisfied, the theory has been preserved; the continental surgeons, however, insisting on a greater degree of inflammation than the British. Even the ordinary ligature, he observed, has been known to fail, from the injury and consequent inflammation inflicted by it; to obviate this, he was induced to try the effects of metallic ligatures, from observing that such substances frequently remained in the body without exciting any uneasiness. On applying ligatures of leaden wire to the arteries of dogs, he found, after death, that they remained *in situ*, without surrounding inflammation, or were removed by interstitial absorption, the arteries being impervious. The same results were observed when the experiment was made on the jugular veins of rabbits. An improvement was made by Mr. Weiss on the leaden ligature, by substituting soft metal wire, capable of being knotted. He next alluded to the well-known fact of the closure of arteries in lacerated wounds; this he attributed to the rupture of the elastic coat and the elongation of the outer or cellular, so as to present merely a minute orifice, which was closed by coagulated blood, and not by the retraction of the artery, as Mr. Abernethy had supposed. In the treatment of stumps, he thought it a matter of doubt what arteries must necessarily be tied, when the powers which nature possesses to repress hæmorrhage be considered, if the cut surfaces be treated as an open wound, with cold applications. He related a case communicated to him lately by Mr. Darley, near Bray, in Ireland, in which, after amputation of the hand of a child, the stump was dressed with lint, kept wet with cold water, *and no ligature was applied or required.* This, the Professor deemed to be the first case on record, in which amputation was performed without the application of a ligature;* he related another case, of severe wound of the thigh, in which the femoral artery was opened, and after some delay was tied, yet hæmorrhage to a considerable amount recurred; nevertheless, by keeping the wound exposed, and cold (in the form of ice) applied, the bleeding was repressed, and the closure of the wound proceeded to a favourable termination.

"Professor Gibson, of Philadelphia, stated, that twenty-five years ago Dr. Physic had introduced ligatures of leaden wire, influenced by the same considerations as Dr. Macartney. This he wished to state, not as detracting from the merit or originality of the learned Professor's views, but as corroborating them.—Mr. Hodgson agreed with Dr. Macartney, that inflammation was not necessary to the reparation of injuries, but he did not think that what Dr. Macartney called the modelling process, was the usual means Nature adopted for the closing of arteries; but contraction. He thought metallic ligatures might prove injurious, from causing ulceration and sloughing of arteries in their process through the body. He also objected to soluble ligatures, such as catgut, as liable to premature softening. Silk ligatures he thought injurious, from their too long detention on the artery. Hemp, as in common twine, he deemed the best. He agreed with Dr. Macartney that the exposure of an artery promoted its contraction, but thought it might prove a dangerous experiment; experiments on healthy animals might lead to inferences not to be applied without danger, to seemingly analogous cases of invalid patients.—Professor Macartney explained that he did not advocate the metallic ligature in all cases.—Mr. Wickenden detailed a case strongly supporting Dr. Macartney's opinions, as he thought. It was one in which amputation was performed on a patient whose arteries were extensively ossified; attempts to fix ligatures repeatedly failed, yet, by attending to the elevation of the stump, and the application of cold, serious hæmorrhage was prevented.

"Dr. Blakiston read a paper 'On the Sounds produced in Respiration, and on the Voice.'"

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* Professor Koch never applied a ligature, even after amputation of the thigh. We have given a description of Koch's mode of repressing hæmorrhage, and the success attendant on it, in a back volume of THE LANCET.—ED. L.

BRITISH MEDICAL ASSOCIATION.

Sept. 3, 1839.

R. DAVIDSON, Esq., V. P., in the Chair.

THE minutes of the last meeting having been read and confirmed, Wm. Parry, Esq. was admitted a member of the Association.

The Secretary laid on the table several copies of the Report of the Nottingham Branch of the British Medical, in which the Council were glad to find medical reform so ably advocated, and the system of tender for parochial medical officers so strenuously opposed.

A letter was read from the President containing two communications; the one from Martin Sinclair, M.D., of Manchester, on the subject of Medical Reform, and requesting copies of the plans of the Association; the other from Mr. Wallace, of Hackney-road, on the formation of medical societies for the suppression of illegal practitioners.

Resolved unanimously,—"That the Report of the Deputation to Liverpool, to meet the Deputation of the Irish Medical and Provincial Medical Associations, be adopted."

After the transaction of the routine business of the evening the meeting adjourned.

UNIVERSITY COLLEGE HOSPITAL.

HYDATIDS, SIMULATING OVARIAN DISEASE—FATAL.

S. P., aged 47, was admitted on the 20th of July under the care of Mr. Liston, and transferred to that of Dr. Thomson on the 29th of the same month. She was supposed to be labouring under ovarian dropsy. The patient was a married woman, residing in Clare Market, of a dark complexion and delicate conformation; her parents are both alive, and healthy. Before her marriage she was subject to hysteria. She is a mother. She married twenty years ago, since when she has enjoyed good health, until four years ago, when she was taken ill with a feeling of languor and general indisposition. She had been suffering before that period from anxiety of mind. The disease began with swellings of the legs, after which her abdomen began to swell; the swelling of the abdomen commenced in the form of a tumour in the lower part, on the right side, and thus gradually extended upwards towards the left side; her urine was scanty and high coloured; the presence of water in the abdomen, or some cavity contained in it, was evident; it increased so as to interfere with the function of digestion, and latterly with that of respiration; she was tapped six months after the commencement of the disease; the size of the abdomen was not, however, completely reduced, and she still had a tumour at the lower part of the left side; the water increased again very rapidly, and she was tapped a second time in the course of a month; she has since that time been repeatedly tapped at short intervals, in all, forty-eight times; the whole amount of fluid which has been drawn off is 177 gallons. She was tapped on the 22nd of July by Mr. Liston, and thirteen quarts of fluid were removed, since which she has again increased enormously. The size of the abdomen has never been completely reduced by the tapping.

There is at present distinct fluctuation; the abdomen is much swelled, and there is considerable discharge from the part where she was last tapped; her digestive functions are considerably disturbed, and she is often troubled with heartburn; the tongue is clean and moist; the bowels are regular; she passes but little urine, and this is thick and dark-coloured; the respiration is not now affected, nor are her legs œdematous; the surface is colder than natural, and she complains of a sensation of cold, particularly in her feet; the pulse is very low and weak; the catamenia irregular, and, when the menses do appear, they are often profuse and long-continued.

July 27. She was placed on full diet, and was allowed half a pint of porter daily.

31. Ten leeches to be applied to each groin; she was also ordered the following mixture, two tablespoonfuls of which she took every third hour:—Three drachms of the rectified oil of turpentine; one drachm of the solution of the bimeconate of morphia; one drachm of powder of gum acacia; and eight ounces of water. She also used the following embrocation to the abdomen:—One ounce of oil of turpentine, and six drachms of tincture of opium. Milk diet. The pressure of the fluid and the distention increasing, Mr. Hunt, the house-surgeon, was requested to draw off the water, which he did by introducing the trocar through the wound made on the 22nd.

Aug. 1. Symptoms of peritonitis have supervened; a blister to be applied over the abdomen. She sunk rapidly, although half an ounce of wine was administered every hour, and died on the 2nd, at 8 o'clock, A.M.

The history of the case, Dr. Thomson observed, led to the opinion that there was ovarian dropsy, and this idea obtained credit from the fact that a tumour had, at first, appeared on one side, of an unequal surface, and that the health had not been very materially impaired. He mentioned this to demonstrate to the students how difficult it was to form a correct diagnosis, even when the symptoms were so evident as scarcely to permit of a mistake. That there was no ovarian disease was demonstrated by the autopsy.

After-Death Appearances.

Head.—No trace of disease was found in the brain; on the dura mater and connected

with it, beneath the left lobe of the cerebellum, was a small tumour, of a soft consistence, and a light greyish colour, covered by the arachnoid coat lining the dura mater; there was an indentation in the cerebellum corresponding to the tumour, but no lesion of the cerebral substance, nor the membranes.

Thorax.—The lungs were healthy, but very much congested; the left ventricle of the heart was slightly hypertrophied, but otherwise healthy.

Abdomen.—The liver was healthy, but congested; both the portal and hepatic systems of veins were gorged with blood; the gall-bladder was distended with bile, which was much inspissated; the spleen was healthy, and firm; the kidneys were natural. On opening the abdomen a large quantity of yellowish-brown serum was found effused, and almost filling the peritoneal sac; both on the abdominal lining and the visceral covering were found patches of coagulable lymph; the intestines were in many parts adherent to one another, and to the abdominal parietes most firmly, in the vicinity of the uterus, where, also, was the greatest quantity of lymph.

Uterus.—Within the cavity, which was dilated, was found a small quantity of a pale bloody fluid; the organ itself was much hypertrophied. From the fundus and the left side a large dense tumour, or, rather, excrescence, of a fibrous or fibro-cartilaginous nature, projected and attached to this tumour, and connected with the bladder, the peritoneum lining the parietes, and the viscera at various points all round, was a cyst capable of holding, in its evidently contracted state, three quarts of fluid; the walls of the cyst were very dense, of considerable thickness, and closely adherent to the surrounding parts; the internal lining membrane had somewhat, but not entirely, the appearance of a serous membrane, and showed traces of inflammation, vessels full of blood and patches of redness appearing through it and in the membrane itself; coagulable lymph, also, was effused in various parts over the surface. Both within and without this cyst and attached to its parietes were hydatids of different sizes, the smaller ones varying from the size of a pea to that of a large orange; they were all filled with the same yellowish-brown fluid, and some of them enclosed other hydatids; hydatical cysts, containing a fluid, varying in colour from brownish-yellow to a deep brown, were found throughout the abdomen attached to the peritoneum, both on the walls of the abdomen and on the viscera; they were most numerous in the neighbourhood of the uterus.

The ovaries were of the usual size, reddish, but not otherwise diseased; both of them were completely unconnected with the large cyst as well as with the smaller ones. Within one of them there was found a cartilaginous matter, very dense, but it did not augment the size of the organ; the opening through the abdominal parietes, made in the operation of paracentesis, entered the large cyst already described, from which the fluid procured in the numerous tappings to which the patient had been subjected, evidently proceeded.

Remarks.—The observations which Dr. Thomson made on this case were intended to demonstrate the difficulty of forming a correct diagnosis in cases the history of which afforded what might be considered satisfactory evidence of the existence of ovarian disease. The lateral position of the tumour at first; the little impairment of the general health, and the regularity of the catamenia, with no effect on the urinary organs, were the usual symptoms of ovarian dropsy; and such were, nearly, those in this instance, although the ovaries were scarcely affected; the cartilaginous hardness in one excepted. It was not easy to point out any diagnostic features which might enable this diseased condition of the abdomen to be recognised; nor did it appear to be of much importance, as no means with which we were acquainted were likely to prove beneficial or capable of removing it. The operation of tapping was borne in such cases as well as in those of ovarian dropsy; and it might be as frequently repeated, if due care were taken to prevent the introduction of air into the cyst.

In the case under consideration the bursting of the imperfectly cicatrised orifice could not have been prevented, and as the patient and the nurse alone managed it when the discharge ceased, the air must then have entered, and operated as a source of irritation, sufficient to set up the inflammatory action which was the cause of death.

Besides cysts of this description, which were rare, Dr. Thomson remarked, that ovarian dropsy might be confounded with dropsy of the uterus, or hydrometra. One certain diagnostic feature, however, in hydrometra was the obliteration of the os uteri. He referred to a case of hydrometra, of which he published an account in the thirteenth volume of the "Medico-Chirurgical Transactions," in which the woman appeared to be six months gone with child. The abdomen was tender, the fluctuation obscure, and the health deranged. The patient died of dry gangrene of the leg, and an opportunity was thus afforded of ascertaining the real state of the case. The uterus was enlarged to an extent which enabled it to hold several quarts of fluid, and the os uteri was obliterated.

He mentioned also another case in which the obliteration of the os uteri was incomplete; it consequently gave way, and a large quantity of fluid was discharged by the vagina. This case, which happened in

a woman of the town, was mistaken for ovarian dropsy. In the case under review, the tumour or excrescence, which arose from the left angle of the fundus uteri, and which appeared to have been developed between the layers of the muscular coat, seems to have been the source of the artificial sac which contained the serous fluid, the glutinous and albuminous character of which led in some degree to confirm the erroneous opinion of the ovarian nature of the disease. In its early stage this growth would not have prevented impregnation, for although the fallopian tube was rendered impervious on that side, yet it was free on the other; and cases were recorded of women having families who had only one ovary and one fallopian tube. In the progress, however, of such tumours the uterus became hypertrophied, consequently in an advanced stage of the disease barrenness was the result; or if impregnation took place early abortion followed, from the impossibility of the ordinary development of the uterus connected with pregnancy.

The hydatids, in this case, were of that description which Lænnec named *acephalocysts*; their form globular; their coat, or sac, composed of two separable layers; and the fluid contained in them of a light brownish-yellow or amber colour, and pellucid. This species of hydatid was separate or distinct, and the covering was of a fibrous or fibro-cartilaginous nature. They acquired a great size, and generally contained small, or young hydatids, diffused through the fluid, or adhering to the sides of the sac. As the hydatids advanced in growth, they often adhered to the neighbouring parts; and it was probable that the great sac, which had been so often emptied in this case, was originally a large hydatid. Even the small hydatids contracted when they were emptied, in which case their coats necessarily thickened.

Acephalocysts had been found in every cavity of the body, and had been discharged by the natural outlets, as well as by suppurating openings. Dr. Thomson would not pretend to tread upon the disputed ground of their animated nature. It had been supposed that their contents were a fluid eliminated previously from the blood, an opinion which, if true, was favourable to that of their parasitic nature. In this case it was probable that the inflammation of the peritoneal coat of the uterine excrescence, similar to that which caused ascites, occurred, and afforded a nidus for the generation and growth of the hydatids. But this was purely a hypothetical supposition.

The chief value of this case, said Dr. Thomson, to the student, was to point out the modesty with which opinions respecting the nature of even well-known organic affections should be advanced.

THE EAR SPECULUM.

To the Editor of THE LANCET.

SIR:—Will you permit me to introduce to the notice of the profession a slight deviation in the construction of the *speculum auris* in common use, which I flatter myself will be acknowledged an improvement. You are aware that the instrument most approved in this country is that used by Itard and Deleau, having smooth and polished blades. Of course, such a speculum can only be employed with any advantage in the cartilaginous portion of the meatus, acting thus far as a dilator; and it is surprising to what an extent this portion of the canal may be dilated without causing pain or inconvenience to the patient. By a *slightly raised* and *roughened surface* of the extremity of each blade, *externally*, to the extent of an eighth of an inch, I believe I have added to the sphere of utility of this instrument, in enabling the surgeon to use it not only as a *dilator* of the cartilaginous portion of the auditory passage, but as a *retractor* of the (in numerous cases) thickened and tumefied integuments of the bony portion of the passage, especially in cases of otorrhœa, and by thus thinning it enlarge the passage sufficiently to enable him to obtain a view of the *membrana tympani* in many cases in which it would be otherwise impossible. At first sight it may appear an instrument of more painful application than the one in ordinary use, but it will not be found so in practice.

With your permission the instrument shall be left for a few days at the Lancet Office for inspection, or it may be seen at Weiss's, 62, Strand. I am, Sir, your very obedient servant,

JAMES YEARSLEY.

29, Sackville-street, Sept. 2, 1839.

TO CORRESPONDENTS.

Senex would interfere unnecessarily. No harm will occur, personally, to either licentiate, whenever the feud is renewed. The contest,—like the sword-fight between Lords Waterford and Alford, at "the tournament,"—is designed to damage the armour, not to hurt the man. The combatants will be proud to show the scars on the insensible steel.

The expostulation of *Mr. Hely* shall appear next week. The printer finds that, with a few remarks which we have attached to it, the letter cannot obtain a place in the present number. It should have been sent earlier. A large part of the Journal is obliged to go very early to press.